

AMERICAN AGRICULTURIST.

Designed to improve all Classes interested in Soil Culture.

AGRICULTURE IS THE MOST HEALTHFUL, THE MOST USEFUL, AND THE MOST NOBLE EMPLOYMENT OF MAN—WASHINGTON.

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WORK FOR THE MONTH.

Morn on the mountain, like a Summer bird
Lifts up her purple wing, and in the vales
The gentle wind, a sweet and passionate wooer,
Kisses the blushing leaf, and stirs up life
Within the solemn woods of ash deep-crimsoned,
And silver beech, and maple yellow-leaved,
Where Autumn, like a faint old man sits down
By the wayside weary—"*—LONGFELLOW.*

The Autumn time is unmistakably with us. It is here in all its chastened beauty, tinging field and forest with a somber hue. It is one of the most delightful seasons of the year in our climate. The Summer heats are over, and the Winter frosts and winds are yet in the distance. It is only in the early morning that the chill air makes the fire upon the hearth-stone enjoyable. All day long the mellow sunlight and the soft air invite you forth to the labors of the field, to way-side wanderings, to hunting in the deep forests, or to fishing where the speckled trout still watches for the insects that float upon the stream. With all the signs of decay around you, Nature never wears a more charming aspect, or speaks in more winning tones to the heart of man. It is a season of fruition to the farmer. His long delayed hopes are at length realized. The corn that he planted with trembling, and cultivated with solicitude through the floods and drouths of Summer, now reveals its golden kernels beneath the ripening husks. Frost cannot injure it now. Drouth will not blight it. It is as secure as if it were already in the store-house. Pleasant visions rise up before the farmer as he looks over the broad acres covered with this precious grain. Now it is a pocket full of money, or an increase of bank stocks. Now it is a heap of yellow meal to be wrought into the delicious brown bread of our Puritan fathers, or to be served up in Johnny cakes, hoe cakes, hasty pudding, samp, hominy, or the hundred other nice dishes that his good wife knows so well how to prepare. He loves to gaze upon this crop ripening under the October skies, until his soul catches the hue of the sunlight that lies soft, like the smile of God, upon his fields. Everywhere the earth is full of his riches. Here potatoes of snowy whiteness are nestled in the rounded hills. There turnips still show their broad leaves, and the swelling bulbs beneath. Here are stacks of grain and hay, the overflowing fullness of

his barns. There are his flocks and herds cropping the aftermath, now in its glory.

And the uncultivated wilds and forests are quite as charming to the eye.

"What gorgeousness, what blazonry, what pomp
Of colors burst upon the ravished sight!
Here, where the maple rears its yellow crest,
A golden glory; yonder, where the oak
Stands monarch of the forest, and the ash
Is girt with flame-like parasite, and broad
The dog-wood spreads beneath a rolling field
Of deepest crimson; and afar, where looms
The gnarled gum, a cloud of bloodiest red!"

These scenes of forest splendor greet us on every hand in our country, and every one that has a soul within him must rejoice in the Autumn aspects of Nature.

The harvests are secure, and now the farmer has a little leisure to contemplate the esthetics of his occupation. In the hurry of the hay and grain harvest, time could not be afforded to study the appearance of things, and to put them in order. Now a word of exhortation upon

NEATNESS

may not pass unheeded. This is a prime virtue in husbandry, an essential part of it, if we take that word in its strict acceptation. Not only is it more pleasing to the eye to have the farm premises in order—a place for every thing, and every thing in its place—but it is far more profitable. In fifty farms where neatness reigns, and fifty more where a sloven bears rule, you shall find thrift almost always keeping company with good order, and shunning the society of the slack and slovenly. It is economy to have a tool-house, where every farm implement can be sheltered, though the first cost is considerable. It is a sad waste to have the carts stand exposed to all the weather, the axes stuck in the log at the wood pile, the plows left in the furrow, the chains hanging by the barn-yard gate, and the ox-yoke and whip at the watering trough, the scythes hung in the apple tree over the grind-stone, and the shovels and hoes rusting in a corner of the stable. Wood goes to decay, exposed to all the changes of the weather, and farmer Slack, who has a place for nothing, spends more money in repairing decayed tools than farmer Tidy does in keeping everything in order. He spends more time in looking up missing tools than his neighbor does in putting up every tool clean and bright when he has done using it. It is much easier to put a tool where you can find it, when you have it in hand, than to lay your hand upon it when you do not know exactly where it is.

We love to see a neat farm-house, the abode of contentment and thrift, the clap-

boards painted, a yard neatly fenced in, and graced with borders for flowers, stone fences built in straight lines, orchards well trimmed, and loaded with fruit, barns of ample dimensions, with every fork and rake and milking stool where the owner can find them in the night.

The value of these habits of order is beyond estimate in a household where children are in course of training. The farmer will almost inevitably leave his own habits stamped upon his sons. If they go forth to other callings with a cultivated taste, and with habits of neatness and order, it will be a passport to favor wherever they may go. The foundation of success in life is already laid in those virtues which they have learned to cherish at home. Looking at this matter, then, in almost any point of view, it will be found that neatness pays.

And now that the pressure of harvest duties are over, look a little at the small matters which so many are prone to overlook. There is a rickety board fence that every wind threatens with an overthrow. Let it be repaired or renewed, so that you will sleep quietly in the Winter nights. Here is a piece of dilapidated wall that has been making sheep and cattle breachy for a dozen years. Let it no longer tempt cattle to their undoing, and to the ruin of your crops. There are boulders in the meadow on which many a plow has been wrecked. Let them be blasted or buried. Let all things offensive to good taste be removed.

PRESERVING FRUITS AND VEGETABLES.

And while the farmer himself is slicking up out of doors, the farmer's wife, within, should be making some slick things for Winter. With the self-sealing cans of varied type, and patent, no good house-keeper has an excuse for not laying in a good supply of those fruits and vegetables which now grace her table. They keep perfectly in these cans, and some of them can hardly be distinguished from the fresh picked articles. Green corn, tomatoes, peaches, berries, plums, and other perishable fruits, not only add greatly to the delicacies of the farmer's table in the Winter, but they promote health. Nothing can be a more agreeable change from the inevitable salt junk and potatoes than these preserved fruits and vegetables. Lay in a good stock of them.

SHELTER FOR STOCK.

Many farmers still neglect their animals in Winter, feeding them from the stack-yard, in the open air. This practice is not only barbarous, but is very expensive. It takes

a third more of hay to carry a cow through the Winter by this method, and with the best of hay she will not come out in good condition. Warm stables are a substitute for fodder, and an animal sheltered in them is much more easily kept in high flesh. Then, by stabling animals, we can save all the manure, which is quite too large an item for farmers in this age to throw away. Many who have large farms, and do not wish to build a barn large enough to hold all the hay and grain, build several small barns in different meadows. These save the carting, both of hay and of manures. In no case should hay be foddered out to cattle without some kind of shelter. A hovel opening to the south can be made very cheaply, and with light walls and thatched roof, it will keep cattle quite comfortable. They will save the cost of building in a single Winter. Now is the time to put them up.

ORNAMENTAL TREES.

There is quite too great a dearth of these about farm houses. Nothing renders a home more attractive than rows of stately trees along the roads that lead to it. They occupy land that can be used for no other purpose, and in a few years become valuable for fire-wood or for timber, if one can afford to put them to that use. But when once planted, and adorning the road-side, and by their beauty adding value to the farm, few would feel that they could afford to cut them down. We learn to prize many things that have no pecuniary value. Plant elms, maples, oaks, lindens and ashes, and watch their future growth. Unconsciously the affections will cling to them, and we shall find them strong ties to bind us and our children to home.

RENEW THE FAILING FRUIT TREES.

Some have died with age, after long and fruitful lives, trees planted by your predecessors upon the farm. You have enjoyed the fruit of their labors, and it is meet that you should plant for others, even if you never see their fruit. Some trees of your own planting are already dead. It is not strange that every planting is not a success. All crops fail sometimes, and the fruit-grower must have his share of failures. Trees, well planted, are much more likely to live than to die. Plant pears and apples this Fall, from the best nursery near you, and let your children bless you.

THE FARMER'S HOLIDAYS.

The fairs where the best stock and the best products of the farm are put on exhibition, should have your patronage. Go up to them, as to a feast of the soul, and take your wife and children with you. It is a needed recreation, after the labors of the Summer, and you can not fail to gain some new hints in culture, in stock and crops, that will profit your next year's operations. But farmers should send up the best of their products, as well as go themselves. Every farm should be represented in the county fair.

We hail with great satisfaction the multiplication of these societies all over our land, and the increasing multitudes that come up to them every year. Put down the fairs as a part of your programme for October.

CALENDAR OF OPERATIONS.

OCTOBER, 1887.

[We note down a summary of various operations, many of them very common ones, it is true, but a simple catalogue like this will often suggest a piece of work that would otherwise be forgotten. The Calendar is adapted to the latitudes of 40° to 44°. A little allowance must be made for each degree of latitude—earlier north—later south. This table will be made out anew every month, and adapted to the season of each year.]

EXPLANATIONS.—The letters, f. m. l., refer to first, middle, and last of the month.

Doubling the letters thus: ff., mm., or ll., gives emphasis to the particular period indicated.]

FARM.

October is still an important month for the farmer, in which he husbands with care the remaining crops of his Summer's toil, and with an eye to the approaching Winter forestalls the wants of his household and of his flocks. Any of the operations detailed in our Calendar not attended to last month should now claim early attention, and among the varied sources of recreation and amusement which should occupy some portion of the time during the Autumnal months, do not neglect the

Agricultural Fairs—but show by your own countenance, and the presence of your family, that you take an interest in the improvements going on around you. Examine with a critic's eye the contributions of stock of all kinds, the farming utensils, and the products of field, garden and orchard, and see if there are not some things in one or all of these departments which you might profitably adopt.

Barns and Hovels—See that enough are provided to house all the stock next Winter. If there is any lack, a temporary shelter may be constructed by setting crotched posts into the ground and laying rails over the top, covering the whole with sedge hay, weeds or corn stalks. Board up the sides open to storms and cold winds, and you will have a hovel which will answer a good purpose to feed in by day and shelter animals from the driving storm.

Beets—Dig and store the crops ff. m. or before heavy frosts have injured them. Twist or cut the tops without wounding the crown. Bleeding is injurious to this root.

Beeves—Feed ff. m. while green crops are plenty and Fall pasture holds out. They will fatten faster and with far less expense now than on corn next Winter. The pumpkins and soft corn can now be fed out to advantage.

Buildings of all kinds—Look to early, and repair the leaky roof, glaze broken windows, nail on the started siding, renew the broken hinges, and fit the tie-ups and stables for their Winter tenants. Have everything in readiness against the cold and storms of next Winter, remembering that the subtle snow finds its way through small chinks and crevices.

Cabbages—Harvest m. ll. at the extreme North, and for keeping through the Winter, lay in a double row with heads down, and bank up with earth, leaving only the roots out of ground. They should be on dry ground, and if to be taken out during cold weather in the Winter two boards may be laid up against the sides and straw filled in instead of covering with earth, or they may be transplanted to the cellar, setting the roots in sand or earth.

Carrots—Dig and store m. ll. or before the ground freezes. Give the tops to milch cows.

Cattle—Give extra feed now that the pastures afford but little grass. Allow no animal to begin a cold Winter in thin flesh. Milch cows should have all the refuse of the garden, with small roots, pumpkins, cornstalks, &c. Young stock should be well fed the first Winter, and now is the time to begin. Cut and feed the second growth of Chinese Sugar Cane if you have it.

Cellars—See that they are well cleansed previous to receiving fruits and vegetables. Keep well ventilated until too cold to admit air. Clear from rats and mice and bank up those which will not exclude frost. With ample cellar room, many of the fruits and vegetables of the farm may be stored away for marketing in Winter at much higher rates than can now be obtained.

Cisterns—Construct these of ample size for both house and barn. A little labor and expense now will save much time and manure lost by driving cattle half a mile during the Winter, and cutting holes in the ice for them to drink from, to say nothing of the danger of broken limbs from slipping.

Corn—Select the seed at once, if not already done. See page 198, last number. Cut up those fields still standing, and husk early, housing the stalks for Winter fodder. If corn is cut, without being previously topped, as soon as the kernels are well glazed and after curing the fodder a short time in the shock, husked and the butts or stalks mowed away in the barn, both corn and fodder are much better than when left exposed in the fields to sun and rain, heat and frost.

Draining should be continued until wet and heavy grounds are reclaimed.

Grain Stacks—These have stood out as long as profit-storing away in

airy granaries, vermin proof. Save the straw for Winter feed and bedding, rather than allow the cattle to trample the who e under feet at once.

Hemp—Complete harvesting ff. m.

Hogs—Commence giving full feed to fattening hogs. Cook food where practicable, using unripened corn, pumpkins, apples, tomatoes, carrots, &c., stirring in a quantity of Indian meal. Do not neglect their yards, as abundance of the best of manure should be made while the fattening is going on.

Leaves from the Orchard and Forests—Collect ff. m. l. and store in large quantity under cover for Winter bedding, and for hot beds in the Spring. You can not procure too many, nor place too high an estimate upon them as absorbents and fertilizers of themselves.

Manures—Invest both money and time in collecting and manufacturing these, instead of laying out so much to purchase them next Spring. Draw upon the much swamp, the fallen leaves and mold scrapings of the forests, the turf and loam from the road sides, and use abundantly in cow and horse stables, hog pens, barn and hog yards, and under privies. Plow the yards often to assist absorption, and clean out the sty, privy and hen roosts frequently.

Muck—Dig as long, and as much as possible. You can scarcely have too much.

Paint m. ll. those buildings and fences requiring it. Autumn is best for this operation as the paint strikes in more gradually, and is firmer than if put on in Spring.

Plow stiff or clayey soils, turning them up to the action of air and Winter frosts.

Potatoes—Complete digging f. m. and when convenient put in lime barrels, or dust a little dry lime among those for Winter keeping.

Poultry require a greater supply of meat or fish as their insect food diminishes. Cleanse their roosts often and barrel the contents for guano.

Pumpkins—Gather and house before heavy frosts. Expose in a cool place under cover to as much wind and air as possible and only remove to a cool dry cellar when in actual danger of freezing.

Root Crops—Expose to sun as little as possible while harvesting. If put in stacks or heaps in the field, leave an opening for ventilation, closing only in the severest weather.

Sheep—Supply with salt, and see that their feed is sufficient. Keep the buck from them at present except at the South. Lambs should not come in until warm settled weather in Spring.

Stone Fences or Walls—Build along roads and on lines between neighbors where no changes are required. Besides making substantial fences you are clearing lands for the plow, mowing machine and horse-rake.

Sugar Cane—Cut and press ff. any mature field not harvested last month. Secure the second forage crop before heavy frosts.

Timber—If not cut last month it may still very properly be done. Many prefer leaving it till the fall of the leaf, but August and September are generally considered the most desirable seasons.

Tools—Read article on "Lard and Resin for Tools," and after coating all iron and steel surfaces, put them away under cover until wanted next Season. Re-read "Farmer William's Tool House" in last number.

Turnips—These will need harvesting only at the North during this month. They will continue to grow during frosty nights. Hoe late sowings ff.

Wheat and Rye—Keep cattle and sheep from eating off, unless sown early and having a strong thick stand. Even then feed highly if at all, these allowing a good growth upon the ground when Winter sets in.

Wheat should all have been sown last month. Put in ff. any neglected then.

ORCHARD AND NURSERY.

In the Orchard the chief business will be gathering and storing fruit, which unfortunately, farmers in many localities find a light task this year. Those who have kept their orchards in the best condition have the most and best fruit. Many advocate Pruning at this season, and we much prefer removing large limbs now than in Winter or early Spring, always preferring, however, the Summer. In the early part of this month, is a good time for planting, new Orchards for which suggestions are given on another page. Almost every farmer has some places where a few apple, pear or cherry trees might grow without being in the way, but on the contrary an ornament and shade about buildings, in yards or along fences. A row of Winter apple trees may very properly be set out upon either side of roads, lanes, &c., doing very little harm, and the fruit, being unpalatable, until gathered, is not likely to be carried off.

The Nurseryman will be busily engaged in his semi-annual harvest, this being the season of Fall sales. To fill orders with dispatch, trees should be taken from the Nursery rows and set in a trench near at hand with stakes to mark the division of kinds. From such rows a variety of kinds can readily be selected.

Apples—Pick Winter varieties with care mm. and lay them in the fruit room or barrels at once, leaving the heads off until the sweating process is completed. Try salt and also lime barrels, or lime sprinkled in for a portion, and note the results. Keep cool and dry. Buds inserted last month need looking to ff., if the bandages have not already been loosened.

Evergreens may be removed f. m. if done with care. As often stated, Spring is preferable.

Fruit Trees—Apples, Pears and Quinces, may very properly be set out early in this month. It is better to leave the more tender stone fruits, such as Apricots, Peaches and Nectarines, till next Spring. Cherries and Plums succeed well with Fall planting if done early on dry ground.

Grounds for Fall or Spring planting either in orchard or nursery, should now receive a heavy manuring, and be plowed and subsoiled, or trenched. They will be in a planting condition much earlier for it.

Hoes may still be required to remove late weeds which sometimes live through the Winter, if unmolested.

Labels—See that those on standard trees are sufficient for the Winter. In addition to labels, the name of every variety should be recorded in a book for that purpose, so that you may cut buds or grafts with a certainty as to kind. Suffer no single tree, or bundle of one variety to leave the nursery without a plainly written label attached.

Mice—Guard against their ravages both in the orchard and nursery, by removing all weeds, grass and rubbish from about the trees. To protect the trunks of standards, take sheet lead or even tea-chest lead, old floor oil cloths, or birch bark, and encircle their bodies for about ten inches in height, pressing the bottom a little into the earth and slightly banking up about them. Of course they should fit closely to the tree and be removed in the Spring, and laid away for future use. If the season proves wet during late Fall there will be very little danger of mice gnawing the roots beneath the ground. If dry, walk around each tree and use a stick to see if any burrows have already been made, and if found, place in them corn, meat or other food combined with strychnine or arsenic. Follow this up till the ground freezes, and it is not likely your trees will be injured.

Ornamental and Shade Trees—Plant the deciduous or leaf-shedding, mm. l., or immediately after the Fall of the leaf.

Pruning may still be done, though as above stated we prefer July and August.

Seed Beds—Prepare by deep plowing, and a good dressing on moderately dry soil, where no water will stand during the Winter.

Stone Fruit and hard shelled Nuts—Collect and plant or put in earth at once. Early Spring planting will answer if the seed is put in boxes of earth as soon as ripe and exposed to frosts during the Winter. Some of those requiring this treatment are Apricots, Cherries, Nectarines, Peaches, Plums, Nuts of nearly all kinds, Acorns, Thorns, Buttonwood, Magnolia, Tulip, Dogwood, &c. Apple, Pear and Quince seeds should be treated in the same manner.

KITCHEN AND FRUIT GARDEN.

The gardener will now find employment in harvesting late crops, preparing grounds, sowing cabbages, onions, lettuce, spinach, &c., covering plants and arranging and planting his cold frames with early Spring crops. In gathering late vegetables, he should collect all the tops and small roots, also tomatoes, squashes, &c., not suitable for family use and feed to cattle and hogs.

Asparagus—Prepare grounds and plant new beds f. m. Cut down old growth and cover both old and new beds with coarse manure or stable litter ll.

Bean Poles—Collect ll. and store in Winter quarters. Beets will not bear much freezing. Harvest m. or before frost. Remove the tops without cutting the crown enough to bleed. Store in cool dry bins away from frost.

Blackberries—Plant mm. l. on deep good soil. Cabbages and Cauliflower—Set those sown last month thickly in a cold frame m. l. to be covered during the Winter. Late growing crops still want working with the plow or horse-hoe. Harvest mature crops ll. and store according to directions above.

Carrots—Dig and store for Winter m. l.

Celery—Continue to earth up ff., in dry weather. Avoid covering the crown of the plant. Pull ll. and put in Winter quarters either in a trench against a fence, covering with straw and boards, or having cut off a portion of the tops and roots set as many as will stand in a barrel and sift in dry sand enough to cover them. Put in another tier and so on until filled, keeping the whole in a dry out-house or cool cellar.

Cold Frames should be in readiness in the early part of the month. They are easily made by setting boards or plank upon edge and nailing them together around a bed of any desired size. It is better to face them toward the South, with a height of one foot in front, and two feet upon

the back. Glass sash are the best covering, but in the absence of these, shutters or even boards will answer. These frames are to be filled with cabbages, cauliflowers, broccoli, lettuce, &c. Set thickly f. m. and cover until they are well established, admitting a little air each day; afterwards the covers may be raised until freezing weather. Upon the approach of Winter, bank up about the frames with earth, manure or litter, and cover the whole with boards, evergreen brush, mats, &c., to protect them from too great a degree of cold and sudden changes. Ventilate during mild Winter weather. Radishes, lettuce and spinach may be sown in them at the time of planting and will afford a very early Spring crop.

Currants and Gooseberries—Set out rooted plants f. m.; make cuttings m. l. for Spring setting, keeping them in dry sand in the cellar.

Grape Vines—Take down tender varieties l. and cover with earth or litter. Even Isabellas and Catawbas are better laid upon the ground than exposed upon the trellis to the sudden changes of our climate during Winter.

Lettuce—Plant f. m. in cold frames. Seed may be sown at the same time.

Mushrooms—Make beds ff. m. Cover them ll. if the weather is severe.

Onions—Cover with litter, straw or brush, ll. those sown last month.

Parsneps—Take up m. ll. what are wanted for Winter use, and bury in sand in the cellar or put in barrels, sifting sand among them. Leave those for Spring use in the ground during Winter.

Potatoes—Complete digging ff. m. Try lime barrels for keeping them in.

Radishes—Scatter seed among the contents of the cold frame ff. m.

Raspberries—Plant ff. m. on rich, deeply worked, rather dry soil. Cover tender varieties with earth m. ll. or before the ground freezes for the Winter.

Rhubarb—Plant Linnaeus or Victoria mm., and sow seed at the same time if new varieties are wanted, though there is perhaps not one chance in a hundred that the same variety will be obtained. The plants come forward much earlier in Spring when set in the Fall.

Salsify—Treat as parsneps. Seeds—Continue to collect the late varieties for planting another season.

Spinach—Cover ll. the sowings of last month and sow seed f. m. in cold frames.

Squashes—Take in before they freeze and keep in a cool dry place as long as may be, previous to putting in the cellar.

Strawberries may still be planted ff. if not done last month. See page 230. Do not allow old beds to become overrun with weeds and grass.

Turnips are still increasing in size. Harvest Winter-keeping varieties only when severe weather is threatening.

Weeds should decay in the hog pens, rather than in the garden.

FLOWER GARDEN AND LAWN.

These grounds are usually too much neglected this month. In the Spring when planting is generally going on and the unfolding buds of the early blooming bulbs invite to the flower border, we are wont to look among the shrubbery, adding any new varieties which give promise of beauty. But at this comparatively dull season when the beauty has mostly departed, too few have an eye to another year, and they neglect planting those hardy roots, early blooming shrubs, and deciduous shade trees, which give a freer and more beautiful bloom, and often succeed better when planted in the Fall than if left till Spring. A list of these will be found below.

Towards the latter part of the month, after all the flowers have been killed by heavy frost, put the grounds in Winter order with nearly the care usually bestowed on them in the Spring, although much less labor is now required. Cut away all dry and decayed flower stalks, and remove them from the grounds. Gather and house stakes; clean beds and walks from any grass or weeds wrongly allowed to grow in them; rake the gravel smoothly and so arrange everything that as many attractions as possible will greet the eye during the Winter months.

Anemones and Ranunculuses should be planted f. m. The former require much care to succeed well.

Annuals—A few hardy flowers mentioned last month may still be sown ff. to be protected by frames during the Winter.

Bedded Plants—Lift before heavy frosts, and pot for Winter or early Spring blown, Geraniums, Verbenas, Fuchsias, Petunias, &c. Cuttings may now be taken to form new plants of each of the above. Place them in pots at once.

Bulbs—Plant f. m. as directed on page 230. The Flower Garden will not be complete without a good assortment of these.

Carnations and Picotees—Pot the layers which are now rooted, and remove them inside ll., or pack in frames or pits.

Chrysanthemums are now nearly "alone in their glory," most of the other flowers having faded and gone. Keep supported to stakes, cutting away only when killed by hard freezing.

Dahlias and Gladiolas—Mark the different varieties before the blooms disappear, and take up ll. and put in boxes of earth or sand in a cool dry cellar.

Dielytra Spectabilis—Plant mm. l., dividing the roots.

Daisies, Polyanthus and Primroses—Plant in sheltered situations m. l. or cover with frames.

Evergreen Trees and Shrubs—These may be planted now if done with care. As often stated, we prefer May to transplant these in.

Frames—Construct as described under Kitchen Garden for half hardy plants, requiring a slight Winter protection.

Grass and Gravel—Keep both in good order, raking off the leaves and keeping free from weeds.

Grounds for Spring planting will be improved by thorough digging and trenching this Fall.

Pæonies—Transplant, or plant out both the herbaceous and tree varieties mm. l. By planting now they will bloom more freely next Spring, than if left till that time.

Perennial Plants and roots may all be divided and re-set the latter part of this month.

Pits for Flowers—These can be cheaply constructed in accordance with the plan described on page 79 of the present volume (April No.).

Seeds—Gather any late varieties as fast as they ripen. Dry them thoroughly and label.

Shrubs—Plant *Pyrus Japonica*, Dwarf Almond, Hardy Azalias, Sweet Scented Shrubs, Scotch Broom, Mezereon, Deutzias, Honeysuckles, Euonymus, Altheas, Hydrangeas, Jasmine, Privet, Mahonias, Syringas, Flowering Currants, Spisæas, Snowberry, Lilacs, Viburnums, Roses and Chinese Weigelia. These are desirable hardy shrubs, many of them blooming quite early in the season, and on this account do best with Fall planting.

Stocks and Wall Flowers—Take up and pot, carrying to green house or pits.

Trees—Plant deciduous ornamental and shade trees mm. l., unless they are of tender species, when the planting better be deferred till Spring.

GREEN AND HOT HOUSES.

Having thoroughly cleansed and repaired these as directed last month, the flues and furnaces being in readiness to start fires at any moment, look to those plants still out, and bring them in as they require it. The more tender ones will need housing ff. while some may remain in the borders or pots m. to l. Cleanse from moss and remove all decayed leaves while bringing in. Unless there are several houses of different temperatures the plants must be arranged with reference to the heat of one room, placing some near and others at a distance from the furnace. Group them according to their kinds by placing succulents together, bulbs and orchids by themselves, and woody plants in another collection.

Air should be admitted very freely, especially when plants are first brought in.

Fires—These will need starting in houses of tropical plants f. m. The particular temperature of each room, must be regulated by the collection it contains.

Fuchsias—Cut in and place those which are done blooming on dry shelves.

Insects—Do not allow them to get a footing. A determined resistance with oil soap, tobacco fumes and the syringe will keep them in check.

THE APIAR.

BY M. QUINBY.

All the surplus boxes should now be taken from the hives. While waiting for some unfinished combs to be sealed up, the bees may remove the honey in these cells to the hive below, where an addition to their stores is not always needed.

If neglected till now, dispose of all feeble or diseased stocks at once. Any family of bees sufficiently numerous, that is desired as a stock, with insufficient stores for Winter, may be fed to advantage this month, providing they have combs to hold it, without constructing new. Good honey is the most reliable for Winter stores. That from the West Indies is cheapest, and will do well enough by adding a little water, then scalding and skimming it. The best way to exclude robbers in feeding is to place the honey under a close box set on the top of the hive with holes open for communication. Should a tin dish be used to hold the honey, the steep sides need something, say a strip of wood, to assist the bees in creeping up. In the dish put some shavings or light material to keep the bees from getting drowned. Bees can be fed with much less trouble, when some of the surplus boxes only part full, can be spared to set over them. The dry combs left in such boxes are very valuable for another year.

To be safe for winter, the contents, exclusive of the hive, should not be much less than twenty-five pounds to a stock.

FARM SURROUNDINGS.

NUMBER VII—GESE DUCKS AND PIGEONS.

Next in size to the turkey, in the poultry line, is the goose. Now the common goose, one of the road-ranging, fence-creeping, cackling, squalling tribe of nuisances that infest every highway, alley, and common, where a shanty is squatted down, or a lawless family chooses to harbor them to the annoyance of well-to-do, honest, country people, we have nothing to say about. They have no business in the highway at any rate, nor in anybody's premises where there is not plenty of water accommodation, and a close pasture for them. They were, to be sure, in past days, good for their feathers, when people knew no better than to sleep on feather beds, and had no more humanity than to pluck the poor brutes three or four times a year of their coverings to make them with. Feathers are good and useful, indeed, now-a-days, for various purposes, but not according to our notions, to be obtained in the barbarous manner we have named.

Geese may be kept to decided advantage where water abounds, bordered by good pasturage. On sluggish, sedgy streams, for instance, or ponds, or brooks, or bays—anywhere, in fact, where water is accessible, and their presence will do no harm. Their flesh is excellent and nutritious; and although we have known many people who think a goose not fit for the table, yet he who knows not the virtues of a fine young "roast goose with apple sauce," knows little of one of the greatest luxuries that can be set before him. Therefore, with the conveniences above stipulated, the goose is a part of our domestic economy and farm stock. Yet, admitting the goose to our premises, it is by no means to be the vulgar, common thing we have described at the beginning. It should be of the most refined and aristocratic varieties—the *barn-yard aristocracy* we mean—and such as in its appearance and habits will be creditable to your good taste and judgment, a few of which we will describe.

The Bremen is a large fine bird, of twenty pounds weight at full size and age; white in color, both male and female; domestic and quiet in habit; full in body and shape; delicate in flesh; and will give you a gosling that at six months old weighs twelve or fifteen pounds when well fed and dressed. It is hardy, a good layer, a faithful nurse, and every way a fine bird. A Bremen gander put with two or three well-selected common geese, will breed you a fine drove of goslings, when you cannot have a sufficiency of thorough-bred females to raise a supply for the table.

The African, or Hong-Kong, is the largest and noblest bird of the goose tribe. It will weigh twenty-five pounds at maturity, has a delicate flesh, and will take on fat amazingly at an early age. The beauty of its ashy plumage, commencing with the dark stripe down its head, and neck, from its high knobbed, black bill, down to its body, long, arching, and swan-like, with golden iris round its deep hazle eye, and capacious form as it sets gracefully on the water, make it a noble bird. Its cry, too, is musical, and where plenty of water can be allowed for its marine exercises, it is a beautiful object to look upon, and have about you. It has nearly the grace and quite the beauty, on the water, of a swan.

The White China is less in size, about half that of the African, but equally beautiful on land or water, and, in form, like it in all particulars. It is snow white in plumage, with an orange bill and legs, and a voice clear and clarion in its cry, like the other.

The Black China is less than the White in size, darker in color than the African, with black bill

and legs,—a wonderful noisy, busy-body, yet very domestic and kind in its habits, and its cry the same as the others.

All these foreign tribes of geese are hardy; but they lay too early in our climate, and for that reason are shy breeders. Thus they should be kept as ornaments, chiefly, to the place, and to grace your park, pasture, and water. Either variety of these *ganders* are valuable to cross with the common goose, to give you a fine flock of goslings in the Fall of the year, the mother being equally prolific, thus crossed, as if bred with a common gander, and the gosling much better fleshed. We have reared all those varieties in their purity, and in crosses, for many years past, and are perfectly satisfied with them as an ornamental and useful bird. The hybrids, or mongrels of either sex will not breed, and therefore should be brought to the table before they are a year old.

DUCKS.

The Duck stands next in our category of water fowls; and the ordinary household duck is so common a thing in its human companionship about the habitations of many people, and as a table dish, that it is hardly necessary to describe it. For rearing them conveniently and profitably, an allowance of water is needed, although not in such a quantity as for the goose. There are several superior kinds of the duck besides the common, such as the Rouen, the Aylesbury, and perhaps another or two—all of large size, beautiful plumage, and excellent flesh, which may be cultivated for fancy, and their fine appearance. If you want to know particulars about any of these, we refer you to our friend, John Giles, Esq., of Woodstock, Conn., who has a taste and fancy in all kinds of fowl that few people possess, and keeps every variety worth having which he can lay his hands upon, both foreign and domestic. The rest the books will tell you. We commend these fine birds to all those who have the proper conveniences for keeping them; and although not so stately and ornamental as the African and Chinese Geese, in a pond, or a lake, they furnish a decided ornament to a near water view, aside from their excellence as an article of diet. We like ducks about the place, decidedly, when kept away from the door-yard.

PIGEONS.

These graceful and familiar birds fill a department not at all occupied by any other class of poultry usually kept. They are beautiful objects, flying and alighting about the premises, hovering over the out-buildings and yards, picking up the scattered fragments thrown out among the larger stock, or left in the grain fields, and when proper conveniences can be furnished, they should always be a part of the feathered population of the homestead. They are excellent for the table, particularly the "squabs," just as they are fully feathered, which is decidedly the best age for that purpose. They will breed five or six times a year, and with a trifle of attention multiply amazingly.

As to varieties, there are many; and those who have a taste for the fancy kinds may choose among either, or all, of Carriers, Tumblers, Fantails, Pouters, or whatever other variety may be named. Yet, be it understood, that as all the family are gregarious, flying and intermixing with each other in their neighborhood rambles, the fancy breeds must be confined and kept strictly with themselves, or the whole dove-cote will in a short time be of every variety, color and complexion belonging to either. The trouble, therefore, of keeping fancy kinds must be well considered before it is undertaken; and if you keep but one variety of fancy pigeons, even in case they fly at large, the chances are that as your neighbors breed only the common kind, they will, in a few months, become so inter-

mixed that your pleasure in the production of the pure fancy bird will be destroyed. Therefore, unless your accommodations be remarkably good for keeping them separate, and none of the common kind are near to interfere with your own birds, you had better adopt only such as are common in your vicinity. The fancy pigeons are less hardy, and frequently less prolific than the common kind, are no better for the table, and, unless you are all away by yourself, a great deal of trouble.

It is a little odd that poultry books do not treat of pigeons as they do of other domestic fowls; for, among the several treatises in our library—and, by the way, for some of these treatises aforesaid we have very little respect—we find none that do the domestic pigeon even the honor of mention; or, if so, they give us no valuable instruction about their breeds and modes of rearing. Fortunately, however, the breeding of pigeons is a simple affair. A snug box inside of almost any out-building, where it is secure from rats, minks, weazels, cats, and birds of prey, with a passage out into the open air, is all that need be required for common use. These boxes and outlets may be multiplied to accommodate any number of birds; yet, where an ornamental dove-cote is desirable, it may be constructed after any model your taste or fancy may suggest. One of the best we ever saw, and which we would adopt as a model, were we to construct a new one for our own use, we saw at the pleasant farm residence of Rev. R. J. Breckinridge, D.D., near Lexington, Ky., a year ago. It stood by itself, near the principal out-buildings of the farm, and consisted simply of four posts set in the ground, perhaps fifteen high, in a square form, six or eight feet apart. About ten feet above the ground were four sills framed into the posts, and at six or seven feet above them four corresponding plates on the top of them. Over these plates was thrown a roof in the common way. The sides all round between the sills and plates, was securely boarded up, and on the sills was laid a floor. One front of the huge box, or house, as it now became, after being so inclosed, was pierced with tiers of pigeon holes, outside and inside of which were shelves for lighting upon. On the opposite side to the entrances was the door to admit the person having charge of the house. On the other two sides, within, were tiers of continuous partitioned boxes built over each other, with eight or ten inches space between to admit examination, and the taking out of the birds. Thus, on their entrance into the cote, the whole space was in common for each pair to select their own nesting apartment, scores of which, when we saw them, were occupied by eggs and young birds. That the plan was a good one was proved by the multitude of pigeons inhabiting it, which had made it for years their domicile. A flight of *movable* steps ascended to the door on the rear, which was secured by a lock; and the steps removed, the cote was rat proof. In the severest Winters a dove cote on this plan might be too cold, and in the excessive heat of Summer too hot; but with an inside lining, and a body of tan-bark, or saw-dust, between that and the outer boarding, the extremes of heat and cold would be avoided. A dove-cote of this kind might be made quite ornamental among the out-buildings of the place, as well as to serve the purpose of simple utility.

Pigeons are usually great favorites with children, and where the children are, if not too troublesome, pigeons should be kept; or, to the country dweller, generally, they are useful and agreeable appendages to the homestead. We have kept them many years, we love their companionship, and would not willingly be without them.

We ought, perhaps, to apologize for treating so much at length on creatures which may, by many, be thought trivial in their interest, or profit; but as

every one whose home is beyond the smoke and grime of the city, ought to surround himself with all that can add to his domestic pleasures, we shall, at another time, talk of Peacocks and Guinea hens—possibly of honey bees and terrier dogs, and the fish pond, all of which we have had about us—and shall continue to complete the population of a full country establishment.

MECHANICAL PREPARATION OF THE SOIL.

NO. VI—DRAINING.
[Continued from page 199.]

In order to make our articles as complete as possible, we continue a brief description of the various modes adopted for draining. Those referred to in the first two columns below have been practiced in Great Britain, though but little known in this country. We have for several reasons reserved to the closing chapters of this subject the fuller discussion of stone-drains, and especially of tile-drains which are soon to be one of the prominent features of agricultural improvement in this country.

SHEEP DRAINS.—In permanent grass lands, it is often profitable to make small open drains. On hilly land, one method is to run at short intervals a number of furrows along the sides of the hills, with a gradual descent towards the base. The lower side of the drain, formed by the turning down of the furrow, is then rounded off with a spade or shovel, the upper edge of the furrow being also sloped at the same time; and the whole drain is then seeded over with grass. Such drains will gradually conduct the water to the bottom of the hill without producing serious injury by washing, and with little loss of surface. They are only practicable in sheep pastures, and are hence called *sheep drains*. Larger animals would soon tramp down the sides of the drains and destroy them. Another kind of sheep drain is shown in the following figure:

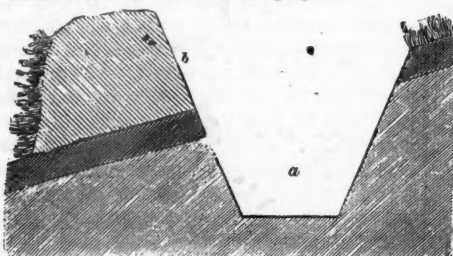


Fig. 6.

The original surface of the soil upon the side hill is shown by the dark strip through the middle. A portion of the earth has been removed from *a*, and turned over upon the down hill side at *b*. Where the sides are made sufficiently slanting these drains may answer a temporary good purpose, or even a permanent one on sheep pastures.

A covered sheep drain is sometimes constructed as represented in the following figure.

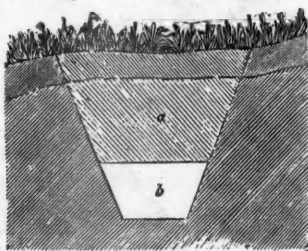


Fig. 7.

This drain is made by cutting a ditch about one and a half feet deep and of the same width at the surface contracting it to about half a foot in width at the bottom. The first sod is carefully cut out entire and laid aside; the rest of the soil is next thrown out, and the sod then returned and pressed down by tramping upon its

two edges, till it leaves the space shown at *b*. A part of the remaining earth is then returned into the ditch, and slightly rounded to make up for any loss from settling.

In figure 8, we have a modification of the same kind of drain, adapted only to a hard clay subsoil, so compact that the sides of the open space *o* will retain their place. Above this is a layer of peat, with the cultivated soil *r*, over it. There are few cases where either of the kinds of drains here described would be permanent enough to pay the expense of construction. The washing of water, the digging of moles and mice, and even the light tread of sheep will be likely to injure, and soon render them worse than useless.

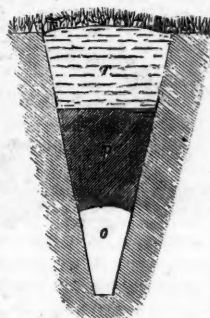


Fig. 8.

Bog Drains.—These are not unlike the last named and are often useful where a tough bog or moss rests upon clay. They are formed by cutting out a heavy square piece of turf *b c* (fig. 9), from the top, and the smaller pieces, *a*, *c*, *c*. The narrow channel *d*, is then made in the clay, leaving the shoulders *e*, *e*, four to six inches broad. The first piece taken out is then inverted over *d*, and the other portion then put in as shown in the upper part of the figure.

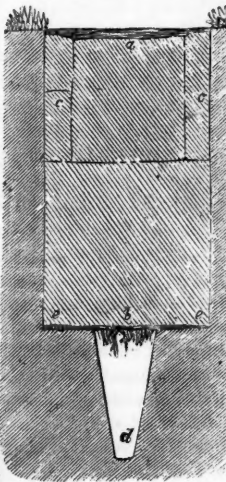


Fig. 9.

Such drains have sometimes been sunk to the depth of six feet. Where moss bog to be so drained is very open or spongy, a cutting of only 1½ to 2 feet should be made at a time, and then wait a few months for the water to drain and the bog to settle, when another similar cutting may be made. After the ditch is completed it should also be left a few months until the ground is dry and compacted, when the filling may be put in.

There are probably few places where such drains would be profitable, since any want of compactness in the turf or clay around *d*, or the occurrence of any little beds or veins of sand or loose earth, would cause them soon to fill up. In many cases it would be found preferable to line the sides of *d* with wood, tile or stone, resting upon a thick board or a plank at the bottom.

Peat-tile-drains are sometimes used where a compact clay bottom can not be reached. These, as shown in fig. 10, are made by placing together two pieces of turf *a* and *b*. It will be seen that by inverting the upper upon the lower piece the rounded portion *b* will fit into the opening in the upper side of *a*. With a peculiar shaped cutting tool made expressly for the purpose, these tiles are cut off from the end of a piece of turf, the cutting of one piece making the half-circular opening in the next. It is stated that with proper tools a man will cut 2,000 to 3,000 of these



Fig. 10.

peat-tiles in a day. The peculiar advantages of this sort of drains are, that they can be constructed where the bog is not solid enough to support a tile or stone drain; and they may also be cheaply made, as all the materials are at hand for their construction. Besides the peculiar tool required for the peat-tiles, and a common edging knife for trimming the sides, the three implements next shown are useful, not only for the drains already referred to, but also for several kinds yet to be described.

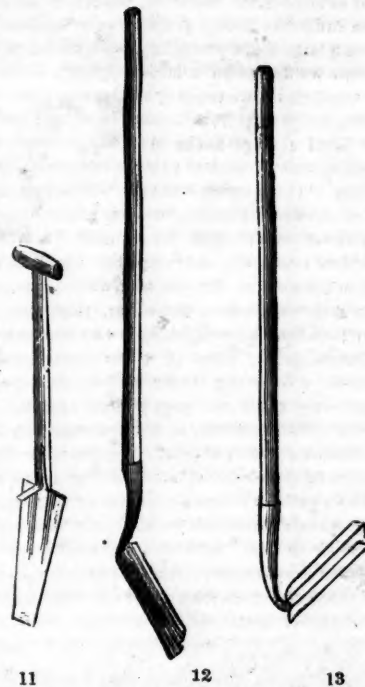


Fig. 11, is a long tapering spade, with an iron spur placed any where upon the handle for the foot to rest upon in pushing the implement down; figs. 12 and 13 are simply long-handled, narrow scoops for clearing out the bottom of drains.

WELL DRAINS.—This method of draining is very useful in some special localities, where there are wet spots resulting from particular arrangements of the soil and sub-soil. The following figure will give an idea of one of these cases.

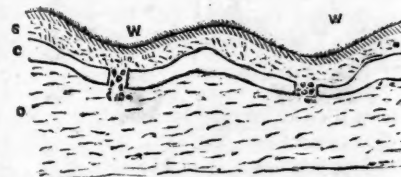


Fig. 14.

s, is a somewhat porous surface soil. Below this *c*, is a compact layer of clay, impervious to water; *o*, is an open porous soil below the clay, which may have some near or distant outlet, so as to be comparatively dry at all times of the year. It is evident that in the hollows, *w, w*, the water will collect and remain, producing a wet spot even in the porous surface soil. If at *w*, we dig a small well or opening through the clay, and fill it up with loose stones covered over a little above the clay with turf, shavings or straw to keep the spaces between the stones from being filled up with loose dirt, it is plain that the water before held in the hollows by the clay, will now flow away through the open soil *o*. Cases like this are by no means uncommon.

If a valley is large, and there is no other convenient outlet, drains may be made down its sides, conveying water into a large well drain in

the lowest place. Care should be taken to have the top of the well-drain below the reach of the plow; and to keep the cavities between the stones well secured from becoming choked up. Where there is a large quantity of water, it is better to build the stones up in the form of a well or vault leaving an opening in the center, and cover over the surface with a flat stone. We had just such a case as this in our experience, in the western part of this State: A few rods from our dwelling, was situated a valley, which received the water from a large space around. In the center of this hollow we dug down a large opening, some six by ten feet, till we reached a very open soil below, perhaps eight feet from the surface. Still below this we found a large seam in the limestone rock, forming a natural water passage to—we know not where. The opening was then walled up leaving a cistern-like vault in the center, which was covered over with plank, stone and soil. This served not only to speedily discharge the water collecting in the hollow, but we afterwards conducted into it the drains from our cellar, pump and cistern; and for sixteen years it has continued to effectually carry away all water from whatever source. Generally these well-drains may be made very small and at a trifling expense, and often a whole field may be drained by sinking these wells in the center of local wet spots. An examination of the under soil, or the trial of an open well, is generally the only means of ascertaining where such drains will be effected. It is but little work to sink down an open hole a few feet deep in a wet spot, and allow it to remain open awhile to ascertain whether it will hold water or discharge it downward.

WOOD DRAINS.—There are so many methods of constructing wood drains, that it would far exceed our limits to enumerate and describe them; and furthermore no method of filling with wood, drains which should be permanent, can be recommended except in rare cases. The decay of wood in most moist situations is rapid, and this decay itself furnishes the materials for filling up and spoiling such drains. One plan is to fill the ditch with willows, pine branches, or other kinds of brush, and then cover them over with earth. Another method is to construct a kind of tubes, by nailing together plank pierced at short intervals with small augur holes. These are so much more expensive than tile drains, which answer a better purpose, that we will not stop to describe them.

Another plan, which has in one instance at least been for the time successful, is to dig the ditch two or three feet deep into a solid clay, making the bottom 12 or 14 inches wide. Logs eight or ten inches in diameter are split into halves, and one of these halves is laid lengthwise upon each side of the bottom, the round side being placed downwards; the joinings of these should break joints opposite to each other. Short boards 12 or 14 inches long are then placed across these and covered with turf, leaves, shavings, or straw, and the ditch is then filled up with the original soil. In very moist soils such a drain would be improved by first putting in a layer of cross boards at the bottom, then upon these the split logs or string pieces and over these the boards. Instead of boards, thick rived staves or shingles might be used to advantage. With a cross-cut saw, logs can be cut up into blocks of the required length, and these are easily split into thicker or thinner pieces for the bottom and top of the ditches. We think this the simplest and cheapest kind of wood-drains when safety and comparative durability are taken into account; and in situations where tile or stone can not be

procured, and where durable timber is abundant, this plan may be adopted with advantage.

STONE DRAINS.—In a very large majority of cases where draining is to be done, tile or stone drains will be found far preferable to any of the methods yet described. We are quite sure that tile drains, of all others, are the cheapest in most cases, and that they will generally be adopted; yet we think this may sometimes be done too hastily, and without a due estimation of some of the peculiar advantages of stone drains,—for though tile drains are usually more easily and cheaply constructed, where tiles can readily be procured, yet in other situations stone drains are sometimes more available, and they have in many cases stood the trials of centuries; and if rightly constructed, we think they give more certain promise of permanent effectiveness.

There are various methods of filling drains with stones, one of which is shown in the next illustration, fig. 15.

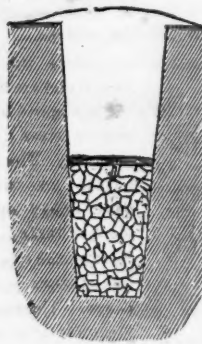


fig. 15.

that has been thrown out in digging.

Where stones abound, we have seen these drains made two to three feet wide at the bottom. We have in mind one case where the soil was so stony that it was entirely dug over, and a continuous bed of stones a foot thick was laid over the whole field two feet from the surface. The owner of the land informed us that the profit of the first two crops paid the whole expense of digging the soil to the depth of three feet, while previously nothing had grown upon the field, owing to its springy and stony character.

A second method is illustrated by fig. 16.

The drain is cut wedge-shaped at the bottom, and two flat stones are put in upon the sides, meeting in an angle at the lowest point, and spread apart from each other at the upper edges. Upon the top of these a flat stone is laid.

This must be wide enough to extend across the drain so as to be kept in place by the sides. When these three flat stones are thus laid, they will form an open drain between them, a section of which may be seen at *a*, fig. 16. Above this, the drain is partly filled with small stones, covered over with gravel or some vegetable substance *c*, and the space *d*, above filled with earth.

A third method is shown in fig. 17. This differs from the second method in the manner of arranging the three stones forming the three-sided opening, *a*. The drain is left square at the bottom, a flat stone is laid in, and the two other stones are set upon this at the sides of the drain,

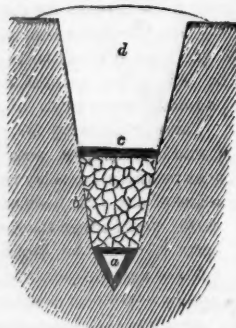


fig. 16.

and then leaned against each other at the top, or one of the stones is wider and lies over the upper edge of the other. In either case there is left the opening *a*, fig. 17, and above them is placed the layer of small stones as before described.

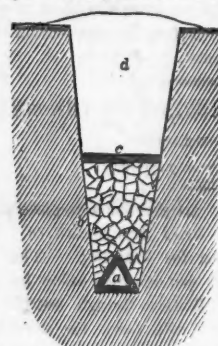


fig. 17.

Which of the two methods is to be preferred, that of fig. 16, or that of fig. 17, depends much upon the character of the soil at the bottom of the drain. In a compact, hard soil, we should prefer the first arrangement, fig. 16, for two especial reasons: 1st, in fig. 17 there is always danger of the displacement and falling-in of the side stones. Great care is needed in putting in the upper layer of small stones, and after the completion of the drain, there is still danger of some such displacement in a long drain. 2d, in fig. 16, when there is but a small quantity of water, it will be compressed within the narrower channel in the lower part, and on this account there will be a strong current to wash out any sand or clay that may have found its way into the drain; while in fig. 17, a small quantity of water will be so much spread over the bottom as to diminish its current, and hence the greater liability of clogging up.

But in a less compact soil, fig. 17 would be preferable, since the flat stone at the bottom gives a good foundation for the rest of the filling up, and this would be safer than the arrangement in fig. 16, where the side-stones rest simply upon the soil, and may be pressed out of place.

As before hinted, the character of the soil, the quantity of water to be conveyed away, and especially the kind and quantity of stones that can be most cheaply obtained, must decide which of these several kinds of stone drains is best adapted to a particular farm or locality. Where small stones only can be obtained, the first method must necessarily be adopted. Where a small quantity only of suitable flat stones, with an abundance of small ones, can be obtained, then the third or fourth method would be the best.

DEPTH OF STONE DRAINS.—The general depth of drains, dependent upon the character of the soil drained, will be discussed in our general remarks upon this subject. Stone drains, especially, need to be made deep, from the depth of filling they require. They, like all covered drains, should be placed entirely below reach of the plow. The common depth of plowing, now practiced, should not be taken as any guide here; for in many fields, and indeed on most farms, the plow has seldom penetrated below six inches from the surface. But a better system is coming into practice. We are quite sure the time is not far distant when most land will be generally broken up with the surface plow at least twelve inches deep, and then six or eight inches deeper with the subsoil plow. After lands have been freed from water for a year or two, by draining, we have every reason to believe, that the deeper they can be stirred and pulverized, the greater will be the produce. The top of the stone filling should then be at least 18 or 20 inches below the surface. Seven inches more should be allowed for the duct in the bottom of the third or fourth methods, (figs. 16 and 17.) The depth of stone above the duct will depend upon the character of the soil, the abundance of materials for filling, and the distance of the drains from each other.

er. The side of the drain constitutes a *drawing* surface. If the soil is compact, the wider this surface, and the more effectual will be the draining. In clay land, it is desirable to have a layer of loose stones, 12 inches deep. Less than this will answer in a soil that presents less resistance to the water. These circumstances taken into consideration, the drain should in all cases be sunk not less than 34 to 40 inches deep, according to porosity of the soil. In our general remarks, we shall present other reasons for constructing all kinds of drains even deeper than this, in most cases.

THE SEWING MACHINE.

An almost unlimited number of inquiries from our readers, on this topic, aside from our own personal interest in the matter, as a purchaser, has induced us to devote considerable time to investigating not only the respective claims of different machines offered to the public, but also whether even the best of them would be a paying investment. On the latter point we have become fully convinced that *nearly* all kinds of family sewing can be done more rapidly, and even better by machinery than by hand. We consider the difference in this respect as fully equal to that of threshing grain by a machine and by hand. Take a single illustration. The other evening on going home we found a sheet just "basted," ready to be hemmed or stitched. Though we have never learned to use a thimble, (having always been favored with a kind mother, sister, wife or friend, to do all needed stitching,) on the above occasion we proposed to turn *seamster*, and stitch the sheet. The result of the trial was, we stitched the edges of the sheet, at the rate of a yard; in three minutes, "including stoppings," and some good judges, present, pronounced our work not to be excelled in fineness, regularity and beauty of stitch, by the best hand sewer. This was our first trial on actual needle-work—we had played sew, with pieces of cloth, a dozen times before. We have since far excelled our first effort. Any of our lady readers can estimate the advantages of sewing a close, fine, strong stitch, even at only the rate of a yard in three minutes.

We could give many illustrations that have already been developed in our own family in less than one month's trial; but it may suffice to say that where there is much sewing to be done in a family—and where is there not?—it is cheaper to employ a good machine, even if it cost \$200 or \$300, or more. Suppose a housewife could, with a machine, do up her family sewing during a year, *easier* than by working with a needle and having the assistance of a seamstress five weeks. This would save, in wages and board, say \$25, which would pay the interest on \$200, and leave \$11 for wear and repair. We estimate the saving as greater than this, and we are free to say that, looking at the subject in barely an economical point of view, if our machine could not be replaced, we would not part with it for \$400 or \$500. The cost was \$125—\$110 for the machine itself, and \$15 for having it put in an extra cabinet, which serves the triple purpose of a table, work-stand, small chest of drawers, besides being a handsome piece of "furniture."

With regard to the difficulty of using the sewing machine, on which point many inquiries have been made of us, we think it requires just about the same degree of skill, or "gumption," as the Yankees term it, to use a sewing machine successfully, that it does to operate a common grain-thresher, or a mowing machine. Our own was sent home with only the manufacturers' printed directions, and it has been worked successfully.

Others have found some difficulty, though not of an insurmountable character where a good machine has been obtained. [A lady in Ohio wrote us an instructive chapter on the various difficulties in her first experience, which we intended to have published, but we have mislaid her letter, and have not her Post-Office address. Will she please write again!]

As to the best *kind* of sewing machines, we are loth to say a word, and have no interest in doing so. There are three, perhaps four kinds now before the public, either of which is better than no kind. We have found none of them sold at less than \$85 to \$100 and upward, which we considered worth buying. Wheeler & Wilson's, Singer's, and Grover & Baker's machines, all work under Howe's patent, and are, so far, the best machines made, we think. We were interested in witnessing the operation of Robinson & Roper's, but not enough to give it any preference over the others. For our own family use, we became fully satisfied that Grover & Baker's machine is the best, and we accordingly purchased it.

From among the many letters on this topic, from ladies who have used the sewing machines, we have only room for the following, from ANNA HOPE, whose contributions on Household Economy are familiar to many of the older readers of this Journal.

To the Editor of the American Agriculturist:

An intelligent farmer would despise himself if he failed to make subservient to his interests any improvement in agricultural implements, or neglected to derive advantage from any new invention of which his circumstances would permit him to avail himself. That the more expensive implements find many purchasers, may be readily seen from the sales books of firms who deal in them. One such house of my acquaintance has sold this year about two thousand mowing machines, and from two to three thousand threshers, the prices of which are \$120 and \$130, and these machines are of course needed only for a few weeks in the year. That the purchase of them is good economy, may fairly be inferred from the fact that so many are sold, and that they give so good satisfaction. We rejoice in all these helps afforded to *men* to make their labor easier or more productive, and we wish most fervently that *woman* might be equally relieved in her own sphere of labor; nor are we unmindful that whatever diminishes the number of "hands" on a farm, diminishes the number of mouths to be fed, and the number of dishes to be washed, and thus indirectly makes the labor of the house less burdensome. But woman needs "aid and comfort" designed expressly for herself. She is too often considered very much of an agricultural implement—a piece of property secured at the altar—to be employed in any way that will add most, with the least outlay, to the money income of the farm, and she is not always cared for with the same watchfulness and anxiety that is bestowed on the horses and cattle of her husband. They must not be neglected, nor over-worked, but she, poor creature, is never supposed to be weary nor over-burdened. This idea of property in woman is a remnant of barbarism, when brute force was the basis of power, and is an indication of remaining barbarism in the so-called civilized world. The more thoroughly the world becomes civilized and Christianized, the more general will be the recognition of woman as an individual *embodied soul*, with wants and capacities no less numerous and actual than man's, and whatever will contribute to her comfort will be deemed no less important than what contributes to his.

The inventive genius of the present age is beginning to develop itself in mechanical contrivances for the relief of woman, and none of these are destined to prove a greater blessing than that of the Sewing Machine. Many a life has been sacrificed in unremitting toil, and the needle has pierced more hearts than the stiletto or sword, but a brighter day is dawning, and the sewing of a family need no longer be locked upon with trembling and dread. For several years I have been much interested in sewing machines, as a means of emancipation to woman, and have examined with great interest every new improvement that came to my knowledge. The price alone deterred me from long ago availing myself of the services of one, for after seeing how quickly and well they did their work, I could not be satisfied with the slow progress made by my fingers, and I could but feel that I was bringing myself down to the level of mere matter, if I willingly did what a machine could do much better and more rapidly. At length I grew desperate, for I was haunted by unfinished work, and it would neither "down," nor be done at my bidding, nor by my persevering efforts. Wherever I went, shirts with outstretched sleeves and dangling wrist-bands hung in mid-air before my eyes, hurling defiance at me, like some evil genius of fairy times, and grinning with most hideous triumph. For months these frightful spirits tormented me, ut, thanks to the Inventor of Sewing Machines I at length found a spell powerful enough to "lay them," and since I have used it, not one has dared to show his ugly head. Shirts are now no longer frisked about in the air by hobgoblins, but remain quietly in the drawer, and do not at all detract from my happiness, for to make one is but the work of a few hours, and I have leisure to look at the "estray" buttons. I am not, by any means, the only woman whose peace has been disturbed by necessary but unaccomplished work. I have had abundance of sympathy in these trials, and now I should be most happy to enjoy equal sympathy in the relief I have found from them.

For several months I have used in my family one of Grover & Baker's Cabinet Machines, and have found it capable of accomplishing all I expected from it, and all that it promised. I have done upon it every variety of family sewing, from muslin sleeves to dresses and pantaloons, and the work has proved equally strong and durable as sewing done by hand. I never feel hurried in my sewing, nor do I feel that I have not leisure for rest. I can afford time for an excursion with my children, without neglecting any necessary work, and I have no twinges of conscience when I sit down to read a newspaper or a book. It is not simply because of the actual work done that a Sewing Machine is one of the richest of family blessings, but it possesses a high value in bringing with it freedom from wearying care and anxiety. There are few families that do not need the relief such a seamstress would afford, and perhaps none need it more than those of farmers, for their domestic cares and labors are usually numerous and pressing. There is certainly no class of persons for whom I feel a deeper interest, or a more earnest respect, for the blood of farmers flows in my veins, and with it a most ardent love of country life; and if by adding my testimony to that of others in regard to the value of a Machine which may bring relief to my over-burdened sisters, I can do aught to benefit them, I am happy to give them the result of my experience. I know something of their toil, of their weariness, of their need of relaxation, and I would fain introduce to their notice that which will lighten the toil, diminish

the weariness, and give them leisure for social enjoyment.

This is indeed "a working-day world," but one not alone for work for the *body*. It must be cared for, but the mind, the heart, the soul, must not be neglected. Every Mother has a higher duty to perform than to feed and clothe her children. They are to be educated, and to be educated for Heaven, and whatever will enable her to give more time to this nobler work is to her and hers no small blessing. What if Sewing Machines are expensive? They are no more so than Mowers and Threshers, and money should not be weighed in the balance against time, for on one depends only the lower needs of this life, while on the proper use of the other depends our eternal destiny. Next to the gospel, I consider the general introduction of the Sewing Machine the best gift to woman, for it gives her time to cultivate her own higher nature, and to devote herself more fully to the best interests of her children.

ANNA HOPE.

LIEBIG'S LAST LETTER ON MANURES.

To the Editor of the American Agriculturist.

In Liebig's third and last letter on Agricultural Chemistry, lately published, he says: "It is therefore impossible to attribute the effect of stall manure to its combustible elements; if these have any good effects it is of a subordinate nature. The effect of the stall manure rests, without the least doubt, upon the amount of the incombustible elements of plants which it contains." If this doctrine is true, it is folly for a farmer to save his stable manure from the waste of firefang, and too rapid decomposition, as the ashes of the manure contain the only elements of much value to vegetable nutrition. But every farmer's experience and experiments in manuring and culture, disprove this darling theory of the great Chemist of Giessen. A conclusive proof of the fallacy of this mineral theory, is found in the very thorough experiments of J. B. Lawes and Dr. Gilbert, on the experimental farm at Rothamsted, England. There, during five consecutive seasons, an acre plot of land destitute of organic matter, was treated with all the mineral elements sufficient for a maximum crop, and sown with wheat. Another acre of the same soil, treated in the same manner, received an addition of 300 pounds of the sulphate of ammonia: when, at harvest, this plot, thus treated with ammonia salts, produced double the number of bushels of wheat contained on the other plot; like experiments afterwards produced the same results.

It is true that the atmosphere will supply growing plants with carbon, in the form of carbonic acid, enough for the structure of a maximum crop, but if the soil is deficient in nitrogen the crop will invariably be short; this is not only in accordance with repeated experiments at Rothamsted, but with every farmer's experience, which teaches him that a manure heap that has not lost its ammonia by firefang, or combustion, is a much better manure than the ashes of the burned pile.

It is no reason, because growing plants receive that which forms their principal bulk from the atmosphere, carbon and the elements of water, that they also receive from thence a sufficiency of nitrogen in the form of ammonia. True, nitrogen forms but a small part in the composition of a plant; but its office is mainly as a solvent of silica (!) and preparer of other matters in the soil, into soluble plant-food. True, no plant can grow without the elements of its ashes, but the mineral

soil is composed of these elements, and it gives them up by disintegration, long after the organic or combustible matter of the soil has been exhausted by growing crops. Again, those mineral elements are never lost in the decaying vegetable; the falling leaf, and the decaying thistle, may die and lose their organic matter in the air, but the ashes remain to form the mineral basis for new plants.

S. W.

Waterloo, Sept. 11, 1857.



HORSE FOR SHOCKING CORN.

The above cut represents a simple apparatus which may be used in shocking corn. The pole *a* is three or four inches in diameter, and say ten feet long. Its size may vary with the weight of the wood. It is supported on two legs, which are simply round sticks fitted into auger holes. A round stick *b*, three or four feet long, passes loosely through an auger hole, say 1½ feet from the upper end of the pole *a*. The whole is made sufficiently light to be taken up in one hand and carried from place to place. As the corn is cut up it is placed in the four angles formed by the pin *b*. When the shock is of the desired size it is tied, the pin *b* drawn out first, and then the pole *a*. It will be seen that the whole thing is exceedingly simple; with only an ax and an auger any one could go into the woods and make one in less than an hour.

CHINESE SUGAR CANE.

HINTS UPON SYRUP-MAKING, ETC.

We have not much to add to last month's suggestions. Many persons have applied to us to procure them a simple, low-priced mill for pressing out the juice on a small scale. We have spent considerable time with several mechanics, trying to contrive some simple apparatus, which could be sold for \$12 to \$15, and yet suffice to extract the juice from a few thousand canes. In this effort we have thus far been unsuccessful. A mill with iron rollers 3½ inches in diameter was tried, but when these were brought together near enough to press out any considerable proportion of the juice, they would not feed or draw in the canes freely, and if they did this, it was next to impossible to turn the crank when a cane-joint passed in, even with a multiplying wheel to increase the power.

A somewhat larger mill, made at the Speedwell Iron Works, Morristown, N. J., which we found on sale at R. L. Allen's, in this city, was tried with unripe canes from our field. This has rollers 8 inches in diameter, with cogs working into each other at one end, and a large cog-wheel, pinion and crank at the other, all set in a strong iron frame. This presses out the juice finely, but it requires more force than man-power to work it. If attached to a horse-power, by a large band-wheel, as they are now being made, this is the best mill we have seen at so low a price as \$75. For our own use, we have calculated that, in the end, it will be cheapest to purchase a regular sugar-cane mill, of large size, which can be used the present year, and if not wanted afterwards, be sold to some one going into the business largely, at the South if not North. We expect before closing this number to receive a description of a rude mill being erected in Ohio—if this arrives it will be given at page 237.

It will not be difficult to get up an extempore wooden hand-press, where only a few dozens or hundreds of canes are to be tried, for the curiosity of the thing. We suggest the following: Take a round, smooth, hard-wood log, 10 or 12 inches in diameter, and saw off two rollers 10 inches long, set these between two planks supported or kept apart at each end by heavy blocks cut 10½ inches long, to allow an eighth of an inch play for the rollers. Hoop the rollers at each end with strong iron bands, put on like wagon tires, by the blacksmith. For axles, take an iron rod 16 inches long and at least 1½ inches in diameter, and drive it firmly through the center of one of the rollers previously bored with an auger, letting the ends extend through the planks to form gudgeons. Put a similar rod through the other roller, but let it extend 5 or 6 feet above the frame, and bend it over at right angles for a lever to turn with. The rollers being put in place, spike the planks firmly upon the 10 inch blocks at each end. To prevent the crank rod from turning in the roller, wedge it tightly, and also put a cross key or pin through it, at the points where it leaves the end of the roller, and drive these into the wood. Make a little duct in the lower plank to conduct the juice to one side, and into a vessel underneath. To prevent the axles wearing into the wood, nail two or three pieces of flat iron around them upon the upper and lower sides of the plank frame. Any one, with a little assistance from a blacksmith, can construct a simple apparatus like this in a single day, and the whole cost need not exceed five dollars.

We recently conversed with Mr. A. Stoutenborough, of Dallas Co., Ala., who has been making syrup successfully this year, and we give his experience, writing from memory. He planted several acres of Chinese Sugar Cane, in drills, putting one seed in a place. Each seed produced one large central stalk with a number of suckers. The suckers not being so forward as the main stalks, he commenced cutting out and grinding the latter toward the close of August, or as soon as the seed began to ripen. The suckers are to be pressed as they mature. He constructed two upright wooden rollers, of large size, putting an iron band around the ends of them, and fitting with wooden cogs to make them turn together. They were set into a strong frame, one of them projecting up for the attachment of a lever for driving by horse. With this mill he pressed out about 70 gallons of juice in the fore part of the day, which was put into a 120 gallon cauldron, or iron kettle, and boiled down just as he would sap for maple sugar. The scum rising from time to time was skimmed off, and when it had become clear he added to it 14 or 15 tea-spoonfuls of slaked lime, first stirring it in water to the consistence of milk. The boiling was continued, skimming when needed, and with a slower heat towards the close of the process. The result was, 12 to 14 gallons of thick syrup of very superior quality from each 70 gallons of juice.

This experiment, on a rough scale, by one without previous experience in sugar-making, will be suggestive to others in like circumstances. In boiling down the juice, it is important to heat it soon after it is expressed. The heat should be kept just below boiling until most of the scum rises when it may be taken off, the lime added as previously described, and the boiling be continued as long as desired, removing from time to time all scum that accumulates. The syrup will be improved by letting it cool after boiling down, say one-half; then strain it through a woollen cloth; stir in some whites of eggs; heat it again gradually and skim, and then complete the boiling.

WONDERS OF THE BEE-HIVE.

NUMBER IV.

Strongly defended as the bee-hive is, one might very soon be dissuaded from an attempt to look inside of it, by one or two attacks from the inhabitants. A single bee can inflict such an injury as to make one cautious, but alas! for the man who is attacked by a whole swarm.

The anger of bees can, however, be checked in various ways. A little smoke blown in at the entrance to the hive has the effect of making them quite peaceable, and of driving them so far away that it is easy to make an examination of the lower part of the comb. This may be tobacco-smoke, or still better, the smoke of *spunk*, (a tinder frequently called *punk*.) Cotton dipped in a weak solution of salt-peter and then dried, is also recommended; or, if necessary, the bees can all be put to sleep by chloroform, the vapor of which has as decided an influence on insects as on men. We cannot recommend its common use, however. It takes the bees several hours to recover from the effects of it, and some do not survive, either because they are suffocated, or perhaps because they come in contact with the stings of their neighbors, which seem to be convulsively thrust out in the excitement of the moment. The system of management introduced and advocated by Mr. Langstroth, takes advantage of the instinct that prompts the bees to fill themselves with liquid sweets, and makes them peaceful by sprinkling them with sweetened water.

By some such plan we will suppose ourselves to have gained access to the inside of the hive, and to have obtained peaceable possession of a large sheet of comb, to which we proceed now to give our attention, and it is worthy of our study.

It is a specimen of insect architecture, framed according to unvarying instinct, and so admirably contrived that no wit of man can improve upon it. All that we can do is to come to it for instruction.

We find the empty comb very light, though one filled with honey is heavy. It is delicate, and easily broken with the pressure of the fingers. We must handle it with caution. The piece we have is made up of six-sided cups, of about the same size and depth, placed side by side, and as many similar ones, opening the other way on the other side of the comb. Near the upper edge are a few cells larger and deeper than the rest, and occasionally we find one with only five sides. This sheet of comb was hung edgewise from the top of the hive, and parallel to it, on either side, were others like it; and as it had no connection with the bottom of the hive, and only partially with the sides, it was evidently built from the top downwards. And it was built by the bees: no one else had a hand in it. The manufacture was all carried on within the hive. There are no chips, nor gravel, nor sand: no straws, nor threads, nor leaves; no saw-dust, nor scrapings of wood, nor lint. Such things may do very well for the nests of birds and hornets and mice; but the bee disdains all such aid, and carries nothing to its hive that is weather-worn or soiled. It uses nothing at second hand. And for neatness and delicacy of workmanship, these cells are a model for mechanics and artisans.

"How skillfully she builds her cell!
How neat she spreads her wax!"

And now we ask what the comb is for, and why the bees are led to make it, just as they do.

The bees, living in large companies, and being obliged to collect their supply of food for the year while the flowers are in bloom, need some means of storing up their winter treasures, and also of cherishing and feeding their young brood. The food of the bees is honey; and they give their

brood the pollen or fine dust of flowers; and as they are sensitive to extreme cold, it is necessary to have these things packed away where they can be easily obtained in winter.

To meet these wants the bees provide small cells, which are sufficient to answer as cradles for the young bee till it comes to maturity, and which will also hold a few drops of honey, or a small cake of bee-bread. We sometimes keep liquid honey in tumblers or bottles; but these would not answer for the bees, as they would certainly be drowned in their own food, if it was put up in vessels of such a size. Probably too, the honey keeps better in small cells than in larger cups. We put all vessels containing liquids with the open side up, at least until they are properly corked and secured, but the bees have their cells open sideways. This they can do with small cells, without risk of losing their contents; the experiment would not be successful with quart cups. But why do it at all? For two reasons. First—if the combs were placed horizontally, like a set of pantry shelves, they would not be strong enough to bear their own weight when filled with honey and covered with bees; and then, such an arrangement would only allow the cells to be on one side of the comb, and would require a great deal more wax for storing an equal amount of honey.

The bees begin to build at the top, and work downwards; why is this? It would be a singular thing for a carpenter to begin a house at the ridge-pole and build down to the cellar. Of course the bees must have something provided to fasten their combs to: a branch of a tree, a board, or something of the kind. They do not "build a castle in the air," exactly. But beginning at the top they can get a firm hold, and arrange their sheets of comb on plumb-lines, and then all the strain of their own weight and of the honey is directly downwards; on the other hand, if they built upwards, as they can be compelled to do, the comb would be in constant danger of tipping to one side or the other, and breaking with the weight of the bees. Now for the *shape* of the cells.

They are six-sided figures, with very thin walls. We might expect round cells, but this would demand much more labor, and a much larger consumption of honey for the manufacture of the wax. The most economical shape is one allowing the cells to be all exactly alike, with no loss of space between.

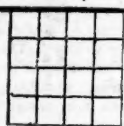


Fig. 1.

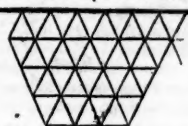


Fig. 2.

These figures show that the square and the equilateral triangle would use up all the space, without loss. But neither the square nor the triangular form would be the best for the round body of the bee. The circular shape would seem preferable, but for the enormous consumption of wax, which is indicated by figure 3.

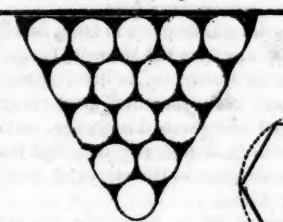


Fig. 3.



Fig. 4.

But if we take a shape very much like a circle, the hexagon, we shall find it answering every end. A hexagon is a figure of six equal sides whose corners are all found in the circumference of a

circle described about the same center as in fig. 4.

Any number of these six-sided figures can be put together, without chinks between; and each one of the six sides of one cell will form one of the walls of another cell; and so we get the genuine honey-comb.

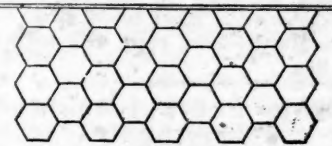


Fig. 5.

A comb constructed in this way is less easily broken than one made with square or three-sided cells, and retains the honey better than if the cells were much larger. Most of the cells in a hive are made of the size of our last figure; but sometimes when honey is very abundant, they are made somewhat larger, and in such cells the drone bees are reared.

And what shall be the form of the bottom of these honey-cups? The circular form would be unobjectionable so far as any single one is concerned, but as the cells are to be arranged so that the same wax-plate is to serve for the bottom of two cells, a circular form would require a wasteful use of wax. This is shown by the heavy black line of figure 6. If the arrangement was such as to make each of the cells opposite two

Fig. 6.

others, there would be some saving as shown in fig. 7; and if straight lines were substituted for curved ones, there would be still greater improvement; and this representation is more

Fig. 7.

nearly like the form actually adopted. (Fig. 8.)

We find in fact that the bottom of every cell is composed of three four-sided plates, each of which forms part of the bottom of

Fig. 8.

another cell; so that every cell is opposite to three others; an arrangement that gives great increase of firmness to the whole structure. This arrangement is seen in the next figures.



Fig. 9.

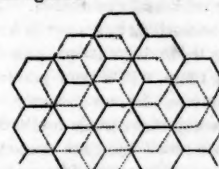


Fig. 10.

Figure 9 shows a single cell opposite to three others; and in figure 10 the black lines indicate the boundaries of the cells on one side, the dotted ones those of the cells on the other side. The cells in this figure are about the size of drone cells, and when the bees have occasion to join these large cells to smaller ones, of course some of the connecting links become irregular in shape.

When the cells are full of honey, they are covered over with white caps of wax, which protect the contents from the air, but are easily removed when circumstances demand it. Cells occupied by the young brood are also covered with a darker colored substance which enables one to distinguish them at a glance.

To this long account we will only add the

statement, that the ranges of comb are placed so near to each other as to give only the room necessary for the bees to pass each other without jostling; and in all these things the bees are guided by an unerring instinct, and have been thus guided for ages; bearing constant testimony to the over-ruling providence of Him who made all things, the swarming insect as well as the firmament and every living thing. All his works praise Him.

INSECTS HURTFUL TO VEGETATION.

One of the greatest drawbacks to success and pleasure in farming and gardening, is the ravages of insects. Their name is legion. You meet them in Spring on first turning up the soil with plow and spade, they swarm about you in Summer, they dog your steps in Autumn, and if you try to cultivate plants in Winter, they infest your green house, conservatory and parlor. They prey upon every tree, shrub, vine, plant, flower and fruit that man cultivates; nay, it is said that nearly every plant has six or eight special enemies. Nor is it very consoling to think that every swarm of insects around us is only one phase of their existence. When they die, they will not stay dead, like good, honest enemies, but reappear, metamorphosed into some new shape, requiring some new method of attack. Moths, millers and flies, are but the representatives and propagators of maggots, worms, caterpillars, &c., innumerable. Is not this one of the plagues of old Egypt reproduced?

But shame on the farmer or gardener who sits down in despair, and lets this allied army take undisturbed possession of his grounds! Let him rather set himself to studying the habits of his enemies, to finding out their weak points, and when and how they can be best assaulted and vanquished. Much useful information has already been collected on this subject by American and foreign writers. The late Dr. Harris, of Boston, prepared a valuable book on the insects injurious to vegetation, and Dr. Fitch, of Albany, is now industriously at work among the *vermin*, learning all their ways, taking their portraits and writing their memoirs; all of which will soon appear in his second Report to the N. Y. State Agricultural Society. These publications also give some of the best remedies for preventing the increase of insects and stopping their ravages. We could only wish that some competent hand would condense these reports into a small and cheap book for universal circulation.

Something has already been learned concerning these depredators, and the mode of destroying them, which is of practical value. Take the curculio, for an instance. We have at least learned that certain methods of combatting him once relied upon are ammunition thrown away. We now know that he can't be fenced out by high palings, nor kept from ascending trees by rings of tin, or cotton batting, or tarred ropes, and that he will often circumvent pigs and chickens. Frequently jarring the tree and gathering up the fallen fruit and insects, and dusting the top of the tree with lime and sulphur seem now to promise more benefit than any other remedy. The German method is also useful, of mixing gypsum and spirits of turpentine, and when dried, dusting the foliage with it when the dew is on. So of the rose bug, rose slug, borer, caterpillar, the scale, jumping louse, and aphides of all sorts, much has been learned respecting them. The best remedies for insects that infest the bark and foliage of trees and plants is tobacco water, or a dilution of whale oil soap applied with a garden syringe.

The rough bark of the trees should be scraped off in Spring, and a good washing of soap water applied with a broom or white-wash brush. The foliage may be cleansed by one or two applications of either mixture, just as the insects appear in the Spring. The whale oil soap should be mixed with water at the rate of two pounds of soap to fifteen gallons of water. Weaker than this, would not kill the insects, much stronger than this would injure the trees and plants. The tobacco water should be used with some caution. The tobacco leaves, (which can be bought of any tobaccoist at a cheap rate,) should be boiled in water until the liquid is of the color of weak black tea, one pound to four gallons of water. To proceed with safety, it is best to try the decoction first on the foliage of some common plant, and if that is not injured, the mixture may be used largely without fear. Every good gardener should have one of those preparations always on hand, that he may bid defiance to a host of enemies.

Another method of subduing insects is bottling them. Common glass bottles with wide mouths, filled to the neck with sweetened water, and hung on the branches of trees will decoy a multitude of insects in the course of twenty four hours. Beetles, millers, wasps, hornets, bees, bugs, flies, of all sorts, colors, and sizes, take blindly to the bottle, like man, and perish. Light colored bottles are better than dark, and they make a better trap if hung at an angle of about 45 degrees. They will need emptying every few days. A friend of ours once caught in twenty bottles, eight quarts of insects in a single day.

As a part of this general warfare, it is important to throw up the soil of one's garden every Fall, into ridges, that the frosts may better penetrate the ground and destroy the eggs and larvæ of insects which Winter there. And if lime is used to alternate, every other year, with salt, it will be all the better.

GRASSHOPPER RAVAGES—A REMEDY PROPOSED.

[We insert the following letter from "An Old Farmer" with pleasure. The writer has raised 'some turkeys' in his day, and speaks from experience. In connection with this letter it may be well to turn back and read the chapter on Turkeys in our last number, page 198. We were not a little amused, when visiting a friend at the West, to see him let out his fowls morning and evening. He had a large number of barn-door fowls, which followed him around the garden like a flock of sheep; and they literally cleared the plants of everything like an insect. They were trained, affirst, by receiving their food in small portions at a time as they followed their owner, and this induced the habit. Sometimes he spent an hour or two in using the hoe, when the fowls kept near him, and even run between his feet. By covering a little grain previously, and then digging it out, the hens had been taught to watch his hoe, and when no grain was at hand they stood ready to nab any unlucky worm or grub that chanced to be uncovered. Our own garden has been kept almost wholly free from insects, the present season, by a multitude of toads which have fortunately taken up their abode there. On this topic see the "Good Word for Toads," at page 156, in the July number of this volume.—Ed.]

To the Editor of the American Agriculturist.

I notice that the grasshoppers in large swarms have found their way from the Mormon Territory west of the Rocky Mountains, to the Territories east of them, and have committed great ravages in Minnesota and elsewhere this season, eating up every green thing in their progress, and leaving the land as desolate as the clouds of locusts do in Asia and Africa.

For one efficient aid in destroying this great plague, I would suggest to every farmer the propriety of raising as many young turkeys as they possibly can next season. Perhaps I shall be laughed at for this recommendation, as totally inadequate to the object. But let me tell my brother

farmers that they have no idea of the almost incredible number of grasshoppers which a flock of 300 half-grown turkeys will devour. Early chickens will begin to pick up the vermin when very young; and it is safe to say that a flock of this number of turkeys will then destroy several hundred thousand weekly; yes, I might say several millions and be nearer the mark. Almost any farmer in our rich Western country can easily raise from 100 to 500 turkeys; and I will engage, if all will do their duty in this respect, they will promote their own interests, destroy the plague before it can advance upon them, and at the same time provide themselves with plenty of fine fat turkey meat for the whole of the succeeding Winter.

Several years ago there was a very destructive worm among the turnips in England, which at length increased so rapidly as to endanger this crop, that is almost as important to British farmers as the Indian corn crop is to American husbandmen. One of the most effectual remedies found for the extirpation of this worm, was the raising of young ducks to feed upon them. The Earl of Leicester had at one time a flock of at least 300 ducks, which he used to let into his turnip fields for a couple of hours or so every morning and evening. They sought for the worms on the turnip leaves with the utmost avidity, and in an incredible short time cleared the fields—the turnips that year yielding bountifully.

I have been a reader of the *American Agriculturist* from its commencement to the present time—fifteen years and upwards—and am happy to add that it has ever met my views in advocating the protection of birds, and even crows, snakes and toads, and the rearing of poultry, subsidiary to the destruction of crop-ravaging insects. If the good advice it has so often given under these heads was more often followed by our farmers, we should hear less complaint from them of the destruction of their crops by the numerous insect tribes.

AN OLD WESTERN FARMER.

NOTE.—Since putting the above in type, we have a report that the grasshoppers are very numerous in Cecil County, Md., so much so that in some places they have entirely eaten up whole fields of seed clover, and the tops of beets and other vegetables in the gardens. These insects are described to be similar to those at the West, and the plague may be nearer to us than is supposed.—[Ed.]

A FREE CONCERT.*

IMPORTANT ANNOUNCEMENT.

FLUSHING, L. I., July 20, 1857.

To the Editor of the American Agriculturist:

Will you please excuse the intrusion of an early rising Lark for dropping into your open window a card from my friends Bobolink, Robin, Sparrow and Jay, which they published in the Vermont Christian Messenger. We have had a meeting of Bird Musicians this morning in your garden, hoping to meet you there to report our proceedings as usual, but hearing you were absent from home, I was deputed a committee to ask you to publish through all the land this announcement, which was unanimously adopted at our gathering.

MISS LARK.

PUBLIC NOTICE!

There will be a Free Concert in every village in the country during the Summer months, at sunrise, to continue one hour, when all persons, old and young, who might be presumed capable of relishing the entertainment, are cordially invited

* This letter, though in type, was unavoidably crowded over in our last two issues. It would never be out of season, however.—[Ed.]

to attend, and listen to the rare music which we offer for their amusement.

All we ask for our services is, to be let alone in the undisturbed possession of our homes and callings. The little boy who threw a stone at Mr. Bobolink, and broke his wing, may remain at home, he is not wanted at our concert. The great boy who robbed Mrs. Sparrow the other day, carrying away her eggs and nest, had better stay and help his mother sweep the kitchen—his presence would not add to our enjoyment. The man who threw a club at Mrs. Robin, who was picking up some worms in the garden for her children, may attend to his garden, and look to the bugs and insects himself; this would suit us better than his attendance. The little girl who got up cross the other morning, and pouted at her mother because her mother wanted her to wash her face, should keep away; it is not intended for her amusement. The great girl who spends most of her time in making or altering dresses to wear to balls, or other parties of pleasure, while her poor sick mother is wearing her life out to support the family, and keep them together, will take the hint that her absence will not occasion us any regret, or lessen our enjoyment; this performance would not be adapted to her nature, and she would gain no satisfaction in listening to our simple, artless strains of melody. The man who spends two dollars every week for tobacco or rum, and other unnecessary articles, and neglects to pay his honest debts, the fumes of his fetid breath would exceedingly annoy us, and we would most respectfully request him to keep at a distance. The man who takes the newspaper, and don't pay for it, may get his music where he can find it; we won't sing to him for love or money. The old bachelor who closed his purse the other day, against a poor woman who had five small children and a drunken husband to support, may lie in bed, or go fishing, or do something else, we do not court his company; if he would attend less to his own comforts, and a little more alleviate the wants of suffering humanity, we would welcome him, most gladly, to our entertainment.

Those who so live that the clamors of a guilty conscience may not mar the harmonies of song, will find vacant seats waiting their attendance.

Please recollect that the first ray of morning light is heralded by our sweetest notes.

MR. BOBOLINK
MRS. ROBIN,
MRS. SPARROW,
MR. JAY, } For the Chotr.

PLOWING POINTED LANDS

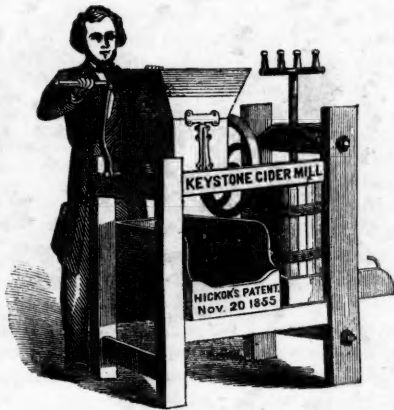
To the Editor of the American Agriculturist:

Though it is customary to strike out lands for plowing, in the form of a parallelogram, that is, both ends of the same width, yet it often happens that, owing to the irregularity of a field, one or more lands run out to a point. In such cases it is the universal practice to plow entirely around them, that is, drive the team to the pointed end and turn round upon the plowed land. Where there are many turnings of this kind there is necessarily much tramping of the loosened ground. In my practice, I avoid this as follows: When going out towards the point, at a place where the plowed land is still say six feet in width, I turn the team round on the unbroken ground and go back around the wide end. By turning about thus as often as I reach a place in the plowed land of only six feet wide, I reduce the whole to a uniform width, and have done all the turning and tramping upon unplowed land. The last six feet is, of course, finished by furrows the whole length of it. It will readily be seen that

the turnings are no more than if they were made at the same places as fast as the land is run out to a point. Besides avoiding packing the loosened soil, it is much easier for the team to turn upon solid ground, especially if the soil be mellow and deeply plowed.

A MAINE YANKEE.

REMARKS.—The above is a valuable suggestion. Practical plowman will, of course, understand that it is necessary to narrow each furrow to a point before turning, and also to strike in on the opposite side with a narrow cut, otherwise the two sides of the six feet wide plot would be left very rough, or notched, and the first through furrows to finish off the last plot would be very uneven, and, at least, show bad. Every one does, or should delight in seeing his work left smooth and even.—Ed.



A SMALL CIDER MILL AND PRESS.

We can not better answer the numerous inquiries for a small, cheap Cider Mill and Press, than by presenting the accompanying illustration of the Keystone mill, which we do without solicitation or even the knowledge of the patentee, simply because we believe it 'a good thing.' We have seen it in operation several times during two years past, and have always been pleased with it. It is cheap, occupies but little space, say 2½ by 3½ feet; it is easily stored, or carried from farm to farm, as it weighs scarcely 400 lbs., and does the work, so far as we have observed, as effectually as the old mills occupying much more space, and costing two or three times as much. We notice in the mills on sale this year, several improvements upon the former construction.

The mode of working can be seen by a glance at the cut. The apples are thrown into a hopper where they are ground to a fine pulp or pummace. This may be done by hand, or by attaching a band from a horse-power to the band wheel. The pulp is then shoveled into the press, which is made of thick narrow staves set nearly together, and held by strong iron hoops. The pressure is applied by an iron screw, which can be turned up and down by hand or with a long lever placed between the upright handles. The usual retail price is \$40. It may be used for pressing apples, grapes, currants, berries, cheese, &c. We have not ourselves seen its full capacity tried. A correspondent who writes strongly in its praise, says that with the aid of his two boys, (ages not given), he easily makes five barrels of cider in a day. We have thus given our own opinion of this mill; if any of our readers find it to fail in practice we shall be glad to hear from them also.

Flowers are the alphabet of angels, wherewith they write on hills and plains mysterious truth.

What is more beautiful and poetical than the child's idea of ice, "Water gone to sleep."

COLUMBIAN GUANO.

INFORMATION WANTED.

We are quite anxious to gather immediate information in reference to the use of this article. Will any of our readers, having used it, please let us know of their experience, where they purchased it, &c.?

BONES—AND HOW TO DISSOLVE THEM.

We have frequently referred to the value of unburned bones as a fertilizer. That bone dust is superior to any and every other manure purchased from outside of the farm, we are so strongly convinced by experience and observation, as well as by theory, that we buy no other fertilizer, and probably shall not, so long as this article can be obtained at anything like a reasonable price. The chief reason for our not writing more on this topic is, that the supply is so limited that it hardly seems worth while to wake up an interest in the matter, or create a demand for what cannot be supplied.

The present year we had about one-fourth of an acre planted with a great variety of garden stuff, using bone sawings, (obtained from a bone comb and knife-handle manufactory,) in the hill or drill with every variety of seed. This was put on thus at the rate of about five barrels to the acre. We held in reserve the sink-slop vault, described on page 157, (July No.,) expecting to draw largely from it. But the damp season has left no demand for watering, and as for additional fertilizing material, why everything has grown so rank and fruitful that a pruning knife or hoe has been constantly needed to thin out or lop off the superabundance. We should hardly be believed, did we write down what beets, turnips, tomatoes, corn, asparagus, kohlrabi, cauliflower, strawberry plants, rhubarb, &c., &c., &c., we have raised. We attribute these chiefly to the bone dust, so finely pulverized that it was all ready to at once nourish everything it came in contact with. An assistant at our elbow says, "that two to four feet trenching must come in for a share of the credit." Well, allow for that, and the bone dust still did the thing. Please turn to the articles on manure, in the first numbers of this volume, and look over the reasons there given why bones are so valuable to plants.

We said bones are scarce, and so they are, comparatively, yet a vast amount could be gathered in the country were there a general, thorough "bone-hunt" instituted upon every farm. Give the boys ten cents a bushel for all they will collect for you, and you will soon find a cart load. There are plenty of vagabond boys in most neighborhoods who might be engaged in such a job, with profit to the community as well as to themselves and friends.

But the great difficulty is in using bones. They should not be burned, for that destroys at least seven-eighths of their real value. They should not be dissolved in ashes, for that is almost as bad as burning. They are best when ground to powder—not merely crushed into small pieces. In this form (powder) they can be put directly into the hill, or drill, with seed, or around and in contact with growing plants, without the least danger of injuring them. They furnish most excellent nutriment and stimulant to all sorts of growing crops and vegetables, no matter what the kind or variety.

The greatest difficulty lies in getting them ground, since bone-mills are scarce, and few of those in operation grind the bones finely enough for immediate benefit. There are few farmers in the older States who could not afford to haul bones 20 or 30 miles to have them ground, but

even this is impracticable in most cases. We do not know of twenty bone-mills in the country. Some get bones pulverized in a mill used for grinding tanner's bark. One of these is better than no mill, but does not grind finely enough.

DISSOLVING BONES IN ACID.

A very good fertilizer may be prepared by dissolving bones in sulphuric acid, commonly called "oil of vitriol." It is a cheap liquid, nearly twice as heavy as water, and costing, by wholesale, at the manufacturers, about two cents per pound for a good article. At a distance the price is higher, proportioned to the expense of transportation. It is put up in large glass bottles, called *carboys*, each holding from 120 to 160 pounds. The carboys are covered with boxes or basket work to protect them, and cost from \$1 to \$1.50. Sulphuric acid is a very caustic burning fluid, which will destroy the flesh or clothing wherever a drop touches. On this account great care is necessary in handling it. We knew of one severe accident from setting down the carboy too suddenly after pouring out—a portion of the liquid flew up into the operator's face. There need be no difficulty with proper care. We have used very many tuns of it for sundry purposes, and have never suffered in the least. If by chance any should fly upon the skin or clothing, an immediate application of water should be made. Ammonia ("hartshorn") applied afterwards, will generally restore colors changed by it. Old garments should be worn in operating with it.

To dissolve bones in sulphuric acid, choose any tight barrel or cask,—an old meat barrel will do, wooden hoops are best—and put into it, by measure, two to three times as much water as you have acid to be used. Into the water in the barrel pour the acid slowly. If all be put in too quickly a great heat will be the result. The bones, broken or unbroken, can now be packed into this liquid until they rise some distance above it. Cover the barrel closely with a board, or wooden cover. The contents should be stirred with a stick, and the bones pushed down from time to time. As they gradually disappear, more bones may be added, so as to keep the liquid filled with them. In the course of four to eight weeks the acid will cease to act. If the dissolving is required to be done more speedily, the bones should be broken into small pieces with a hammer, before adding them to the acid. Some persons have tried to dissolve bones, and become discouraged because the operation was not completed in a day. For large whole bones two months is often required for the complete solution, and it is better not to try to dissolve the whole. Keep the liquid filled with them, and the portions undissolved can be used in the next batch.

To use the liquid, pour it off from the remaining bones and mix it with a large quantity of dried muck, or dry swamp mud, pulverized. Almost any kind of earth, except sand, will answer to dry the liquid with, and sand might be used. The more dark colored vegetable matter it contains the better. A cart load of earth to a bushel of bones, dissolved, will be better than a smaller quantity, though one-fourth of this amount may be used. Mix the mass thoroughly together and work it fine with a shovel, hoe and rake. This may be done on a floor, or on a hard ground surface. When finished, pack away into barrels or boxes to be used weeks or months afterwards.

We know of no better manure than a material prepared in this way. It is better and cheaper than any fertilizer you can buy, not even excepting Peruvian guano. It can be applied in the hill or drill, with all kinds of seed, and will speak for itself. If the dissolving process be continued un-

til the acid is all used up, and plenty of earth be thoroughly mixed in, there is not the slightest danger of its injuring seed or tender roots, though placed in direct contact with them.

WIRE FENCING.

INFORMATION CALLED FOR.

From considerable observation, we long since lost faith in the adaptability of *wire* or general fencing, if put up in the modes formerly recommended. But during the past Summer, we saw a number of wire fences in different parts of Illinois and Iowa, constructed on improved plans, which gave strong promise of being permanently useful, and we are not sure but this kind of fence will yet prove to be the cheapest and most effectual, particularly in *prairie* regions. The kind which appeared the most feasible is that in which the wires are kept in due tension, Summer and Winter, by a weight applied to a lever, the lever being attached to a kind of drum around which the wire is wound.

We commenced preparing an article on this topic, with illustrations of the mode of tightening the wires, &c., but have concluded to defer the matter a month or two, in order to solicit special information from those who have tried this plan and others, as well as those who have witnessed trials in their own neighborhoods. In order to call out replies, we propose the following questions, which we respectfully request our readers to answer at as early a day as possible. We do not solicit letters prepared for publication, but simply replies from which we can collate an article of general interest.

1. What has been your experience or observation in wire fencing?
2. How large wire (what number) do you consider necessary to make a substantial fence, against cattle and other animals?
3. Would you use the same size of wire for the top and bottom strands?
4. How many wires would you recommend?
5. How near to each other would you place them in the upper and lower part of the fence?
6. How would you attach them to the posts?
7. What kind, and what size would you consider the best posts?
8. How near to each other would you place the posts?
9. Would you recommend a board or string-piece to be nailed along the tops of the posts?
10. How long would you extend the wires between the permanent fastening points?
11. What do you consider the best mode of keeping the wires uniformly stretched, in both cold and hot weather?
12. Have you tried the plan of setting two posts with a roller between them for tightening the wires by means of short sticks or levers? and if so, what is the result?
13. Have you tried, or seen tried, the late mode of using short cast-iron drums, pointed at one end for insertion in the posts, and pierced at the head with two square cross holes or mortices, for the insertion of levers, to which weights are attached?
14. Will you please describe minutely (by drawing or otherwise) the form, size of each end, length, size of holes, &c., you consider best for these iron drums, together with their cost, &c., delivered in your own neighborhood?
15. How large, and how long a lever, and what weight is required for a given length of wire, say forty, or fifty rods?
16. How would you attach the weight, say a stone or block, &c., and how heavy should it be?
17. Please communicate any other information or suggestions on these topics that may occur to you.

These questions are, some of them, quite simple ones, we are aware, and we could readily answer each one according to our opinion, but on a topic of such importance to so large a portion of the country, as is embraced in the vast prairie regions of the West, we prefer to get the opinion of a considerable number of practical men, even as to the minute details. In a multitude of coun-

selors there is wisdom. As soon as we hear from a considerable number of correspondents, we will condense the pith of the whole for the benefit of our readers generally.

LARD AND RESIN FOR TOOLS.

"A penny saved is two-pence earned."

Not less than \$50,000 worth of valuable tools, belonging to the readers of the *American Agriculturist*, (less than \$2 each,) will be spoiled, or materially injured, simply by rusting between now and next Spring. The damage alone will be \$50,000. Look at the plows, harrows, cultivators, hoes, shovels, forks, chains, axes, saws, not to enumerate wagon irons, and a multitude of little tools that *ought* to be provided on or about any farm, and then reckon up how many of them will be left where the combined effect of air and moisture will attack their surfaces and eat away enough to render them rough at least, if not to materially depreciate their value. Many instruments are destroyed faster by lying idle than they would be by constant wear. We will not now write a homily upon the value and importance of a *Tool-house*, and of having every implement stored in it, but give a recipe for an exceedingly simple, cheap and effective preparation, one available to all, which will at least save all metals from loss by rust.

Take about three pounds of lard and one pound of resin. Melt them together in a basin or kettle and rub over all iron or steel surfaces in danger of being rusted. It can be put on with a brush or piece of cloth, and wherever it is applied it most effectually keeps air and moisture away, and of course prevents rust. When knives and forks, or other household articles, liable to become rusted or spotted, are to be laid away, rub them over with this mixture, and they will come out bright and clean even years afterwards. The coating may be so thin as not to be perceived, and it will still be effectual. Let every one keep a dish of this preparation on hand. As it does not spoil of itself it may be kept ready mixed for months or years. *Mem.* Fresh lard, containing no salt, should be used. Resin is a cheap article, and may be obtained almost anywhere for four to six cents per pound.

VEGETATION OF SEEDS.

It is often a wonder to novices in gardening, that their flower-seeds do not vegetate. They take infinite pains, in digging, manuring, sowing, watering, and mulching, but after all, many of their seeds will not come up. They blame the seedsman and the season. In many cases, neither is to blame. The cause of the difficulty lies in the too early sowing of their seeds. There is a great difference in the habits of plants. The seeds of even some native plants do not start into growth at the first opening of Spring. And certainly, it would be strange if the seeds of tropical plants should do so. They need the warmth of the tropics to make them germinate. Now, many of our finest annual flowers are natives of South America, California, Africa and Australia, and ought we to be surprised because their seeds will not germinate in the comparatively cold weather of our Springs? Give them their native warm weather, whether in the hot-house, or frame, or parlor-window, or wait until the month of May or June brings it, then they will grow apace.

It is easier to declaim against a *thousand* sins in others, than to mortify one in ourselves.

We do not despise all those who have no vices, but those who have not one redeeming virtue.

ORNAMENTAL STRUCTURES FOR THE GARDEN.

We have heretofore spoken of the appropriateness of introducing simple ornamental structures into pleasure grounds, such as arbors, rustic seats, baskets, frames for vines, &c., and we would fain believe that some of our suggestions have already been heeded. Whether this be so or not, we wish now to appeal to our readers again, and have called in the sketcher and engraver to help us in this appeal, by giving a few newly engraved pictorial illustrations copied mostly from structures in our own grounds or those of our stated contributors.

No. 1, is a rustic basket made of pine and painted the color of willow. It may be of any size from four to eight feet in diameter, and two feet high.

The circular frames at top and bottom are cut out of pine plank one inch and a half thick. The lattice work is $\frac{1}{2}$ inch pine, nailed across from the upper and lower circular frames, to represent the wicker-work of a basket. The whole is then covered with three good coats of dark yellow paint. To make the basket hold soil, it must be covered on the inside with cheap oil-cloth fastened on by carpet-tacks. As it has no bottom, it is comparatively light, and can be easily carried into any chamber loft for the Winter; and it is important to store it away in Winter, to preserve it from decay. When wanted in the Spring, it can easily be rolled out on to the lawn and placed wherever wanted. Set it firmly and level upon the ground, fill with good soil rounding it over in the center, and plant with verbenas, petunias, geraniums, or sow it with annuals. It will make a beautiful object all Summer. Such a basket well-cared for, will last six or eight years.

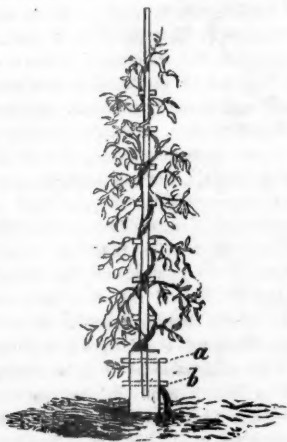


Fig. 2.

No. 2, represents a support for tender vines, and is so constructed as to be lowered to the ground at the approach of Winter. Among the vines requiring such treatment, we would mention the Trumpet Creeper, Chinese Wistaria, and the Prairie Roses. These vines sometimes go through the Winter unprotected without harm, but they are often injured and sometimes killed to the ground; it is therefore safest to lay them on the ground in Winter, where they will be protected by the snow. A post of cedar, three and a half feet long and four inches square, is set in the ground, and rising eight or ten inches above the surface. An opening or slit is cut in the top of this post to receive an upright shaft eight or ten feet high, three inches thick at the base, and tapering to the top. Several rods are inserted in

this shaft to which the vines are fastened. This shaft is kept in its place by two stout pins at the bottom (a and b). On the approach of Winter, draw out the upper pin and lay the frame and vines together on the ground. If needful, a little straw may be thrown over the vines.

Fig. 3.

No. 3, is a rustic flower stand or tripod for holding plants in pots. If the stand is lined with zinc, it may be filled with soil and planted with flowers, like fig. 1. In making this stand—and the same may be said of all rustic work—it is important to use only the most durable kinds of wood. Red cedar is the best; white oak is good if cut late in Summer, and wild grape vine trunks answer a good purpose. Small articles of rustic work should be placed under cover during the Winter.

Fig. 4.

No. 4, is a rustic chair, which any clever hand can make in a rainy day. As will be gathered from the picture, the bottom of the chair is made by cutting a round block from the end of a log. The lower portion can be dug out with an ax and adz, leaving the five legs above shown, or any other number. Any other shape can be given which



Fig. 5.

fancy may indicate, or time permit. The back, composed of vines, limbs, roots, or small poles, fastened by nails, can be fashioned into any fanciful form. A few of the pieces may be inserted in augur holes bored in the outer edge of the seat, which will give greater solidity.

No. 5, is a seat for several persons, designed to stand under a tree commanding a distant prospect. It may be made of grape vine branches, and poles of arbor vitæ.



Fig. 6.

The bottom of the seat is made should be left half an inch apart, so as to allow the rain to pass off readily. The whole work should be open, to admit rain and sunlight to the ground around the roots, or the tree may be injured. When surrounding objects, on all sides, call for it, the seat may well be extended entirely around the tree, as shown in the cut here given. It will be remembered that these figures, though actual representations of struc-

tures we have made or examined, are only designed to be suggestive. It is not desirable that they should be exactly imitated; one of the greatest pleasures to be derived in their construction, is the exercise of one's own ingenuity in introducing novelty and variety.



Fig. 7.

No. 7, is an arbor built around a large elm tree in the grounds of one of our contributors. The posts are of cedar, the frame and lattice work of pine and painted a soft drab color. It is now embowered in shrubbery, and covered with the American Ivy, which also clammers up the old tree above it. So much does that arbor seem to belong where it is, that a little child of the proprietor once asked his father in all simplicity, how he got that tree up through the top of the arbor!

We close our illustrations for this number, by giving a sketch (No. 8,) of a rustic Summer house seen in the grounds of the late Mr. Down-



Fig. 8.

ing, at Newburgh. Most of the structures we have now given can be made within doors, on rainy days, or during the leisure hours of Winter. If made well and of the right materials, they will last any reasonable time.

MOSS ON TREES.

A friend writes us that some of his choice trees, both fruit and ornamental, are suffering from the growth of moss on their bark. He wants to know the cause of it, and especially what to do with it.

If we could sit down for an hour or two on our friend's premises, we think we could answer his inquiries easily. We should first examine the soil in which his trees stand, and see whether it is not wet, or hard, or impoverished. If wet, that would be enough to settle the question. The air above wet soils is full of the seeds of lichens,

and the moisture of the air promotes their growth. In such soils, most trees grow very slowly, and so allow the moss time to get a foothold on the bark, before it is cracked and thrown off by the natural expansion of the tree. Now, abstract the superabundant moisture from that soil by draining; manure it, too, if it needs it, and the tree will start at once into vigorous growth, throwing off the outside bark and the lichens with it. The draining, moreover, will so dry the air that lichens can with difficulty live in it. It is all well enough to scrape and wash mossy-barked trees, especially, if the moss harbors insects, but after this has been once done, nothing more will be required than to keep the soil at the roots in good condition.

BULBOUS FLOWERS FOR AUTUMN PLANTING.

How many of our readers enjoy the sight of a bed of beautiful bulbous flowers in their garden or yard? Some of them we know do, while perhaps many others have never cultivated a single flowering bulb in their lives. For the latter class, we now write.

Bulbous flowers, such as the crocus, lily, tulip, hyacinth, &c., are those which grow from a bulb or root, of a roundish form, like an onion. They can be raised from the seed, but thus grown, they seldom follow the parent plant in form or beauty of flower, so that it is always preferable to get the bulbs or roots themselves, either of a neighbor, or of a seedsman. Some may be planted in Spring, but most of them should be set out in Autumn, to bloom early in Spring. The snow-drop and crocus are the earliest flowers of Spring, and others of the bulbous flowers follow soon after.

These bloom for many years without transplanting, but it is generally preferable to take up and transplant them once in three to five years. Some set out the Spring flowering bulbs in the month of November, but we prefer early October planting, in this and more northern latitudes. Farther south, they may be set later. They are to be planted in the open ground, as described below, and being perfectly hardy, they require no Winter protection, though a covering of leaves, straw, or coarse manure, to be taken off in early Spring, will hasten the period of blooming.

The following list comprises those which are most hardy, and most easily cultivated, and at the same time most desirable, viz.: The White, Tiger, and Japan Lilies; the Fritillarias, including especially the Crown Imperial (*F. imperialis*), and the Persian Lily (*F. Persica*); Tulips; Hyacinths; Jonquils; Crocus, and Snow-drops. The following are very beautiful, but less hardy than the above: Anemone, Oxalis, Polyanthus *narcissus*, Tuberoses, &c. The list might be much extended, but the first-named are sufficient for general cultivation, especially for beginners. The price of these varies from \$1 per hundred for the crocus, snow-drop, &c., to 25 to 50 cents each for tulips, hyacinths, &c. Rare kinds sell much higher. We append a brief description of the kinds recommended, with directions for culture.

Lilies embrace a large family, some of which are found in almost every flower-garden or border. They grow best on a light, deep soil, with plenty of muck or leaf mold—that is, black earth from the woods. The bulb or root, which is composed of scales laid over each other, is injured by being kept long out of ground. Plant four or five inches deep, where they can remain for a series of years. A good effect is produced by massing different colors. They grow from two to five feet

in height, and are in bloom in succession from June till September or October. The Japan, Garden White, Tiger, and Turk's Cap, are desirable kinds.

Crown Imperial (*Fritillaria imperialis*) is a fine showy plant, and with the Persian *Fritillaria* is desirable in a collection of bulbs. Any rich garden soil answers well, and the bulbs should not be kept very long out of ground. They are large and fleshy, nearly round in form, except the Persian, which is elongated. They only require transplanting once in four or five years. Plant four to six inches deep, and one foot apart. They reach a height of two to four feet, and exhibit a variety of bloom in April, hanging in a crown form from beneath a tuft of glossy foliage. In color, the flowers vary from bright red, to scarlet, pink and striped.

Gladiolus communis has a sword or flag-like foliage, producing its bloom on one side of a raceme or spike of a foot or more in length, commencing two feet from the ground. The flowers are white, red and purple, opening in June and July. It has a firm, medium-sized bulb, which flourishes on any good soil. Plant two to three inches deep, one foot apart. Each third year is often enough to change them. Many of this family are planted in Spring for Autumn bloom.

Tulips display an almost endless variety of color, both single and double. They are very appropriately termed *gaudy*, with their unfolded petals glistening in every hue, from bright gold to pale red, white, and purple, with delicate stripes and pencillings of various colors. Over two thousand varieties have been cultivated by name, and new seedlings are constantly being added. So great was the rage for this flower in Belgium and Holland, that it is said that \$6,000 was paid for a single root during the seventeenth century. The bulb is pyramidal in shape, firm, of medium size, although differing greatly in different varieties. Plant on a light soil, well trenched, and enriched with decomposed cow manure and muck, to which a portion of sand should be added. Set the bulbs four inches deep, and six inches apart. They are often planted in groups of three to five, of different colors. They may remain unchanged three or four years. The flower is borne on a naked stem, from one to two feet in height.

Hyacinths were at one time sought after about as eagerly as the tulip, and the fever ran so high that \$4,000 was refused for a single bulb. They must always hold a high rank with the florist, for, joined to a beautiful bloom of nearly every hue, is a delicious fragrance, telling the visitor of their presence by their sweet odor. The varieties are about as numerous as those of the tulip. The bulb is of rather large size, solid, and onion-shaped. It bears a spike or cone of bloom from the ground, six inches to a foot or more in height. It flowers about the middle of May, and by shading it from the sun, the season of flowering may be prolonged into June. Plant, intermingling colors, four inches deep, and eight inches apart, in a soil similar to that of the tulip, surrounding each bulb with a little dry sand. Once in three years is sufficient to replant them. By all means, plant hyacinths.

Jonquils, (*Narcissus* or *Daffodils*) are both single and double-flowered, varying in color from pure white to bright yellow. They bloom on the extremity of a stalk twelve to fifteen inches in height, surrounded by a profusion of linear foliage. The bulb is small and conical, and may be planted on any good soil, four inches deep, and one to two feet apart, according to the size of the *mat* they are allowed to form. They need transplanting only when they have extended over too much ground. Bloom in April and May.

The *Crocus* claims a family of at least one hundred varieties, which are of different colors, such

as yellow, blue, white, striped, &c. They flower in March and April, at a time when very little bloom is to be seen elsewhere. The bulbs are rather small, flat and solid, and require planting two inches deep, and four to six inches apart. They may remain unmolested for several years, and they flourish in any common garden soil.

The *Snow-drop* or *Galanthus* opens the first flower of Spring, not always waiting for the snow bank to disappear. It is frequently in bloom in March. The flower is of a changeless white color. The bulb is quite small, and nearly round. Plant the same as crocus, removing once in three to five years.

A GENERAL BED.

Where a limited space is devoted to bulbs, we suggest that one circular bed include all the above varieties. In a good, moderately dry soil, it will answer to trench the ground two feet, working in plenty of well-rotted manure, and plant at once, or as early as possible this month.

If a particularly fine bed, of a moderate size, is desired, throw out the soil two feet in depth, in a circle of ten feet in diameter. Return nine inches of the best surface soil, and fill the remaining space with a mixture of one-fourth fresh loam from the pasture or road-side, one-fourth sand, one-fourth decomposed muck, one-eighth leaf mold (decayed leaves), and one-eighth well-decayed cow manure, the whole thoroughly mixed, and left to stand a few days before using. The centre of the bed should be left six inches, and the outer portion three inches higher than the surrounding grounds, thus giving a gradual slope for the descent of water. After settling for a few days, commence by planting, say a tiger lily in the centre. Around this, at a distance of one foot, plant, in a circle, six lilies of different varieties, one foot apart. Let the next circle be one foot from the last, or two feet from the centre, and set six crown imperials and six gladioluses, alternating with each other, and one foot apart. For the third row, one foot from the last, make use of eighteen tulips planted a like distance apart, mingling the colors to produce the best effect. The fourth circle may contain sixteen hyacinths, and as many jonquils, alternating, and set nine inches apart. Devote the fifth and last row to crocus and snow-drops, six inches apart, alternating them; this row will contain thirty of each, six inches apart. Having tried a bed on very nearly this plan, we can speak confidently of the general effect. The taller growing varieties are allotted to the centre, and the dwarfs to the outer edge. A bed of this kind can be kept in bloom for a long time by erecting an awning over it during the hot days of Spring and early Summer. This can easily be done by setting a stake six feet in length firmly in the centre, and five more three feet high, at equal distances from each other about the circumference. Stretch a strong cord around the latter, and spread muslin over the whole when desirable, removing at night. Such a bed will afford an unfailing source of pleasure, and a thousand times repay the comparatively little trouble and expense of making it.

STRAWBERRIES

Can still be set out, with a prospect of a moderate yield of fruit next season, if a little extra care be exercised in transplanting. We have gathered a fine crop from plants put out October 15. When practicable, take them up with a little ball of earth around the roots, and they will scarcely feel the removal. If to be carried far, let them be well packed in moss or other material, and spread out the roots well in setting. Fall directions for making beds, selecting varieties, &c., were given at page 208 of the last *Agriculturist*, and in the preceding articles.

BLACKBERRIES.

Letter from Dr. Stoms, of Cincinnati—The New Rochelle or Lawton Blackberry at the West—Native Varieties.

To the Editor of the American Agriculturist.

As the object of your publication is the collection and collation of such facts as may prove interesting and instructive to the agriculturist, horticulturist, pomologist, &c., I venture a few observations suggested by your article in the September number, under the heading "New Rochelle or Lawton Blackberry." From the exhibitions in our Horticultural Society, this season, members generally came to the conclusion that the New Rochelle or Lawton Blackberry was an over-rated fruit. Former descriptions were of a very visionary order, however, and hence the reality scarcely meets with exact justice. The largest contributor of this berry upon our horticultural tables, was Mr. William E. Mears, of Anderson Township, whose plants, I believe, were secured from Dr. Grant. That they were genuine, I have no doubt, as the berries correspond with your drawing, and the shoots with your comments. At each and every time Mr. Mears exhibited the New Rochelle or Lawton, larger fruit by one fourth, equally delicious, rich and juicy, was exhibited by other members from their own fields, growing wild. In short, besides being larger they were equal in every respect of quality. I have also visited the grounds of Mr. Mears, and find that his plants come up to your description in every position stated; the new shoots being from eight to ten feet high, and an inch in diameter at the base. Half a mile from the Nursery of Mr. Mears, in an old woods pasture, is quite a large plantation of wild blackberries; and upon examination of these, I found two or three different varieties, all fine, but one variety truly magnificent, much larger and equally prolific with the Lawton. There is no possibility of a doubt, that if a selection of those I saw were marked, taken up at the proper season and transplanted, properly treated and cultivated, but they could be made to entirely outstrip the New Rochelle or Lawton. Depend upon it, the rage to send east for the latter, since the exhibitions of the past season, has very much subsided, and properly too I think. That you are perfectly honest in your descriptions of their excellence, I make no question; but if none of your wild fruit comes up to the New Rochelle or Lawton, in every aspect and particular, then we can beat you out West—that's all.

WM. STOMS.

Cincinnati, Sept. 1st, 1857.

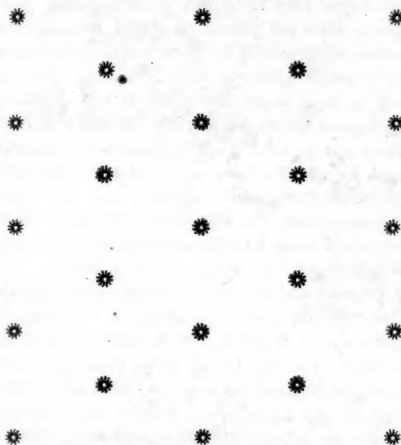
REMARKS.—We have not seen the wild blackberries referred to by Dr. Stoms, but we have noticed the native varieties growing in very many Western localities, and none of them we have seen deserve even mention in comparison with the New Rochelle. Mr. Mears' plants may not produce so well as the same variety hereabouts, but this we must say, that if there are wild blackberries growing in the vicinity of Cincinnati which excel, or even equal the New Rochelle (Lawton,) the enterprising members of the Horticultural Society, at that place, have been remiss in duty in not bringing them prominently before the community, and taking measures to have them propagated and disseminated. We hope they will look after the matter at once. We shall be exceedingly glad to get a few plants of anything better than the New Rochelle.—Ed.

RASPBERRIES

Should be planted this month unless deferred until Spring. Enough has already been said, in

this volume, on the value of this fruit, both for home use and for market. Now is the time to hunt up a supply of the Allen, Red Antwerp, Fastloff, Brinckle's, Orange, Franconia, &c.

DIGGING HOLES FOR, AND SETTING OUT TREES.



To the Editor of American Agriculturist.

In a former number of the *Agriculturist*, I observe a communication on this subject, and wish to add my Western experience in planting trees.

In the Spring of 1846, I planted an orchard of eighty apple trees on the side of a ridge moderately sloping to the south-east, with a rich but rather shallow surface soil, and a stiff clay subsoil. It had been cleared of its natural growth of hazel, wild plum, crab apple, thorns, &c., and cultivated in corn one year. The holes were dug from four to five feet in diameter, and about two feet deep. Half of this depth was a tough red clay, which had to be removed with a mattock, forming a retentive basin to hold water, as was proven by a heavy rain before the trees were planted. This could only be removed by bailing out. The trees were carefully planted, the holes filled with the best of the soil, to which was added for each tree, two wheelbarrow loads of a compost prepared by mixing lime, ashes, stable manure, dead animals and coarse bones, with a little earth, all well pulverized, except the bones, and well mixed. None of the compost, however, was put in contact with the roots. Much care was used in planting, and the roots given a natural position in the earth. The ground was cultivated in corn for the first five or six years, with a good dressing of manure at the last planting; then sown to wheat, and stocked down with clover and a small portion of Timothy.

And lo! for these many years have I sought fruit on my trees, and with one exception found very little, and that of an inferior quality compared with similar varieties in ordinary cases.

I have cared much for the trees, pruning and whitewashing them, washing their trunks with soap, and sprinkling their heads with the same by means of a garden syringe, to expel insects, &c., and have digged about them and dunged them, and with all my care, they have been dying at the rate of two to six a year.

The trees were small when planted, and were set about the same depth as in the nursery. It was a difficult matter to keep them straight, even by tying to a stake, and they have acquired a leaning position some degrees to the north-east, thereby exposing the south-west side of the trunks to the direct rays of the sun, and when the mercury has gone as high as 104° in the shade, the bark has been killed on the sunny side of nearly every tree. The borers have also got into

them, and they all show signs of decay, and appear destined to destruction, in spite of all my labors, and I have concluded to let them go, and plant an orchard in a new place.

I propose to plant on a deep soil, nearly level, though a little inclined to the north-east, as I understand, in the form of an equilateral triangle, or, perhaps, more properly a hexagon, with a tree in the centre, as seen in the accompanying figure—all the trees being equi-distant.

More trees can be set upon the same ground at a given distance apart, in this manner, than in any other, and I think it rather ornamental. I intend to plant in the Fall, and shall dig the holes no deeper than the ground can be uniformly loosened with a subsoil plow, and even then, I shall be a little cautious about throwing out too much of the subsoil. I design training them with low heads, and shall cultivate the ground with corn or vines for a few years, and then stock down with clean clover, which, as a general rule, I would leave to rot upon the ground.

If I have formed erroneous ideas, or if any one's experience or theory differs from mine in regard to the best method of planting trees on grounds with a tenacious clay subsoil, in a prairie region where the winds have great power, I hope it may be given through the columns of the *Agriculturist*. J. F. HUNT.

WARREN, Lee Co., Iowa.

REMARKS.—We commend the care exercised by our correspondent in planting his fruit orchard, and have no doubt but he will ultimately succeed. We are of the opinion, however, that he will find it to pay to prepare for thorough drainage in his second orchard. Trees will certainly do far the best, if set where they have a very deep bed of good soil. If to be planted on a hard-pan, it will be most economical to run a deep drain between each two rows, or, if the soil be very wet, there might be a drain under each row. If this is not practicable, then cut a few main drains, and run shorter ones from each tree. If neither of these modes can be adopted, then plow the ground into high ridge-lands, with deep, dead furrows, and plant the trees upon the summits of the ridges; and let the after-tillage be such that the high ridges and deep dead-furrows shall remain permanent. By two, three, or four plowings, each time making the centres of the lands in the same place, the ground can be so ridged as to give a difference of two to three feet between the level of the top of the ridges and the bottom of the dead furrows. Then set the trees upon the centre of the ridges, preparing deep, wide holes, filled with rich surface soil, for the roots.

Many years since, we planted an orchard in a locality where south-west winds prevailed. We set all the trees leaning to the south-west, say three and a half to five inches from a perpendicular at the height of three feet from the ground. The amount of inclination depended upon the location of the different trees, and the protection afforded by fences, groves, &c. By the time the trees had become thoroughly established, and firmly rooted, they stood very nearly erect, though, as intended, those most exposed still leaned a little, against the future effects of the wind.—Ed.

THE MESQUITE TREE.

The Secretary of the California State Agricultural Society, writing from Los Angeles, says:

"We here saw a Mesquite tree, about nine feet high and ten across. It is a beautiful tree, producing a plentiful supply of beans, which, among the inhabitants of Mexico, are used for fattening

cattle, and when pounded, they produce a fair article of flour for bread. No tree is more valuable in the desert, nor does anything surpass it as an ornamental tree.

It is also very valuable as a hedge plant. It is important that its worth for catile feed and hedging, as well as for ornamental purposes, should be faithfully tried in the upper part of the State. If it can stand the cold, it will be found very hardy in every respect. It grows on almost any soil, without water. This and the cottonwood are the only varieties of wood found in the Colorado country. The tree is of the *Acacia* species, having the appearance of an inverted bowl, that is, it is semi-spherical.

The foliage, very thick evergreen. Its palmata or fern-like leaf has from five to twelve leaflets on each side of the axle. The branches shoot out low down like those of a neglected scrub apple-tree, armed with hard sharp thorns. One variety bears a screw shaped bean, the other one resembles the common string bean.

The tree grows about twenty-five feet high, seldom higher. The gum is excellent for medical purposes, and for pasting is equal to gum arabic, which it resembles. The gum exudes from all parts of the bark quite plentifully. An Indian will collect a double handful in half an hour."

Will some of the California readers of the *Agriculturist*, favor us with any additional information in regard to this tree. If half of what is said above be true, it will be worth looking after.—Ed.

A WORD FOR THE KITCHEN GARDEN.

Our observation during the past Summer, as well as in past seasons, has convinced us that enough attention is not given to the kitchen garden. The farmer neglects it, in order to bestow more time on his field crops, and others neglect it from thoughtlessness, or the pressure of other cares, or supposing that no special care is needful in its cultivation. This is all a mistake. Of how many healthful and delicious vegetables and fruits do such persons deprive themselves! We beg leave to urge a more thorough attention to the humble but useful kitchen garden.

In the first place, then, we say, let the soil be made suitably porous and dry. If naturally sandy, or gravelly to a considerable depth, no draining will be needed. But if not, one or more substantial drains should be cut through it, and then the whole should be trenched or subsoil plowed. No superfluous water will lie in that garden, at any season, and in the dryest time, it will suffer little from drouth. In some cases, even this will not be enough to prepare the ground for garden purposes. It may be such a stiff, clayey soil, that draining and digging and manuring will not make it porous and warm. A garden soil should be light and kindly, one easily worked in Spring, and in which vegetables will grow rapidly. If heavy and tenacious, it may be improved by carting sand upon it, and mixing it intimately with the clay. It may be too great an undertaking to renovate a whole garden in a single year: if so, take one quarter of it at a time, and so on from year to year, until the whole is completed.

Some cultivators practice the burning or charring of clay soils with much benefit. They first make a pile of faggots and brush, then lay over it lumps of clay. After the brush is fired and partly burned, more rubbish is thrown on, and then more clay, and so on, as long as may be desired, making a half smouldered fire, which will burn several days. The heap of charred clay is then

scattered over the garden, and its effects are sometimes truly surprising.

We have not yet spoken of the importance of barn-yard manure in the garden. Whatever may be true of field crops, the kitchen garden cannot get on at all without an abundance of this useful article. Small, tough, fibrous, insipid vegetables and fruits may be grown without it, but none other. Give the ground an annual dressing of it, and one may expect to raise large, tender, juicy and beautiful products, such as it is a luxury to look at and to eat, and such as will command the highest prices in market. If any one complains that he cannot obtain manure for this purpose, we would refer him to our numerous articles on former pages, showing that by a little care in saving the refuse matters about every one's back door, fertilizers enough can ordinarily be provided for the wants of every garden.

We only add, that old gardens which seem to have lost their fertility, may be improved by thrusting the spade a few inches deeper, in the Autumn trenching, two or three years in succession, and bringing up a little virgin soil to mix with the old. And where insects are known to harbor, an annual coating of salt and lime will not be wasted.



THE HOP TREE.

We present an engraving from a Daguerreotype of a tree now growing in the grounds of Edward N. Shelton, President of the Manufacturers Bank, at Birmingham, Conn. This cut we give, partly as a matter of curiosity, and partly to elicit reliable information from those uninterested in introducing it as a commercial speculation. Before us is an advertising card on which we see strong commendations from persons we know, whose statements are contrary to the opinion we formed of this tree a few years since from an imperfect examination. Its flowers called "tree-hops," a little resemble those of a tree called "ironwood," with which we were quite familiar at the West, in our boyhood days. The one above shown is we suppose what is called the hop-hornbeam (*Ostrya Virginica*).

A great change in life is like a cold bath in Winter—we all hesitate at the first plunge.

THE LINNÆUS RHUBARB.

We have this season given this variety of Rhubarb or Pie-plant, a fair trial by the side of the Victoria, which has been a favorite variety. In April we set out alternate roots of the Linnæus and Victoria in a row. All the roots grew of similar size, and they were taken up and planted at the same time; in short, they were treated alike in every respect. On the 16th of August the last trial was made with the Victoria, when it had become entirely unfit for use. We are now, the first week in September, (three weeks later,) still using the Linnæus, and find it almost as good as at any time during the Summer. The growth of the two varieties has been nearly uniform; the Linnæus has, however, produced somewhat the largest stalks.

Sept. 15.—To-day Messrs. Freeman & Kendall, of Ravenswood, L. I., inform us that they are still bringing the Linnæus Rhubarb to this market, and supplying pie-bakers at 4 cents per lb.

PRESERVING GRAPES.

[We are sorry the following article was not received in time for our last issue. It will still be useful, however.—Ed.]

To the Editor of the *American Agriculturist*.

I was surprised on reading the article in the August *Agriculturist*, to see how many ways are resorted to for the preservation of that valuable and delicious fruit, the grape—all of which have proved failures for the want of that knowledge which is necessary to the preservation of all fruits. I have been able, for a number of years past, to keep grapes until March and April, as fresh as when they were taken from the vines in the Fall, and without any saw-dust, sand, cotton-batting, paper cuttings or anything of the kind. The process is so simple, that every lover of fruits should have understood it long ere this. With your permission, I will give you the method by which I have been so successful. My mode of gathering and preserving grapes for Winter use is as follows: When they are fully ripe, suspend a basket by a strap or cord passed around the neck, thereby giving liberty to both hands for picking; with one hand hold the cluster, and with the other cut it from the vine; remove from the clusters all unripe or decayed fruit, and deposit them in the basket until it is filled. (I use a market basket that will hold about a half bushel.) Carry the grapes thus gathered to the place for packing. I use boxes about two feet square by six inches deep in the clear, with covers made to shut tight. In packing lay a newspaper on the bottom of the box, then a layer of grapes, then a paper and a second layer of grapes, which, when closely packed, usually fills the box; set the box in some dry and airy place, with the cover open or off, and let the box remain open for ten days, or until the sweating process is passed; then close the box and set it in the fruit room, cellar or garret, any place where the fruit will not freeze, or which is not extremely damp.

Grapes packed as above directed, will open at any time during the Winter or Spring following, as fresh as when packed. The only secret or mystery is, that the moisture which spoils the fruit when packed in saw-dust and other absorbents, passes off during the ten days that the box remains open, instead of being absorbed, and remaining to keep the grapes damp, and ultimately mould and spoil them. I have practiced this method for several years without the loss of a single bunch of grapes. So perfect has been my success that I have more confidence in the pres-

ervation of the grape than any other fruit. I use shallow boxes for packing grapes, that the moisture may the more readily escape, and that the first layer in the bottom may not be crushed by the weight above.

CHARLES CAMPBELL.
Pomona's Retreat, Aurora, Cayuga Lake, N. Y.

GRAPE CULTURE—NO. X.

BY WILLIAM CHORLTON.

The preservation of grapes beyond the usual period of ripening is a great desideratum, and deserves something more than a passing notice. Dryness is indispensable for this purpose. We know that imported raisins are grapes, which have had the watery portions evaporated by a warm, dry atmosphere, leaving the sugary matter and a part of the aroma. If after the maturity of the fruit, our own climate was as dry and warm as that of southern Spain, there would be no difficulty in keeping the fruit, for we could let the clusters hang on the vines, and gather them as wanted. As we have not their natural advantage in this respect, we must imitate their climate as near as we can. Consequently, no water must be used inside the grapery, and a free circulation of air be maintained, so as to prevent any condensation of moisture upon the fruit. During damp or rainy weather the upper ventilators may be partially left open, which will have a beneficial influence, preserving the texture of the skins, and preventing moldiness. If this is attended to in a house where there is no artificial heat, the fruit may be preserved on the vines until a severe frost is apprehended; and where there is a heating apparatus, for some time longer, even where the fruit is thoroughly ripe. In the retarding house, where the berries are now coloring, the bunches of some kinds may be preserved until late in March by simply keeping out the frost by fire heat, and giving air at all favorable opportunities through the Winter; but without fire-heat under glass, we must resort to other modes if we desire grapes during Winter. There is, however, a great difference in the keeping properties of many of the varieties. For instance, the *Frontignans*, *Muscats*, and several of the *Chasselas*, though early sorts, will dry up and shrink so much that they become partially raisined, and in such state will not decay, providing they are kept in a dry atmosphere, free from frost and suspended upside down, so that the berries hang loosely. There are others that have a solid texture, approaching that of an apple, as *Reine de Nice*, *White Lisbon*, &c., which, by having the bunches cut into small parts and laid upon a shelf in a good fruit room, wrapped with cotton wadding, will keep for several months, while the *Hamburgs*, and other tender-skinned sorts, soon decay after they are fully ripe, and no means has been devised to keep them for a length of time.

Grapes, both foreign and domestic varieties, may be kept a long time by choosing perfectly ripe bunches, and, if large, cut them into small parts, removing any decayed berries, and sear the end of each stalk where cut, with a red-hot iron, exposing them afterwards in a very dry room for three hours. Have in readiness some soft tissue paper, and wheat bran that has been well dried by fire heat. Wrap each small cluster in a piece of the paper, place in a glass jar, and fill in between with a small portion of the bran, and so proceed till the jar is filled, each cluster of fruit being surrounded and covered with the bran. Place a paper over the top, and stretch a piece of bladder over this to exclude the air. Let the jars be stored in a dry, cool room, where the tempera-

ture is kept at 40° to 45°, and use each jar as may be required. Glazed earthenware, or airtight boxes, will answer as a substitute where glass jars cannot be had, always keeping in a dry atmosphere. I may add, in connection with this subject, another method. Last April, Mr. Cole, a neighbor of mine, brought me a beautiful bunch of *Isabella* grapes, as fresh and plump as when first cut from the vine. This had been kept with others in a glazed earthenware jar, which was buried two and one half feet deep in his garden. The flavor was somewhat deteriorated, but the experiment is well worth repeating.

For the American Agriculturist

HOUSE-KEEPING IN THE COUNTRY.

NUMBER III.—FLIES.

If I have been presumptuous in supposing that on some subjects I can dispense useful information to novices, I will confess that there are other topics on which I would gladly receive it, and sit a learner at any one's feet.

To one of these my attention has been much drawn lately, and—it is "fly time!" I was taught at school that flies were of inestimable benefit to mankind as scavengers, removing all decomposed matter and sources of malaria, far more effectually than any other instrumentality. Be it so. I don't grudge them the fields and roads, but as for the house, I am quite willing to take the contract for cleaning that myself.

Can any one furnish us with sure weapons to wage war upon these pests and torments of country life? As for poisons and traps, volumes would not contain the history of my campaigns and defeats. Fly-stone, most seducingly compounded with molasses, dries untasted in the saucer. The old-fashioned tumbler of soap-suds surrounded by a ring of bread, vexed our eyes for three whole days in the sitting room—it was unquestionably more successful, for it caused the untimely death of six flies, neither more nor less. Fly-paper waves like a banner from the kitchen mantel-piece, but no slaughtered hosts fall before it. Catching flies, I fear, is like catching fish, one must have the knack of it. But even if I had, I affirm that though I have elsewhere seen great numbers destroyed, I never perceived any diminution of the swarm, and I have sometimes fancied that a dead fly tumbling suddenly from upper air is quite as disagreeable an adjunct to a dish as a living one sipping and taking flight.

There are some remedies which I have heard of, but have not yet tried. It is a general impression that *fish oil* rubbed plentifully on paint and furniture will banish them effectually, but the plan is open to serious objections. I have also been credibly informed that there is a tree which no fly can approach—no, not within twenty yards of it—but I have not hastened to procure it, partly from want of faith and partly from misgivings that a plant so obnoxious to the fly creation, would hardly be savory to the human.

Seriously, what are we hapless dwellers in the country to do with this plague of the household? Is there no way of destroying them in the egg, like the curculio and the caterpillar? Does anybody know of a poison or fly-trap warranted to thin them out in a few days?

Must we forever spend the loveliest season of the year in scouring and scrubbing, fretting and fuming about a contemptible insect not a barley-corn long?

I hope much from the experienced housekeepers who read the *Agriculturist*. For the present, I can only continue to keep my house in twilight darkness, painfully shutting up the windows after

the "lords of creation," who always will let in a glare of light. The dishes must still come upon the table imprisoned in strong-holds of wire gauze, and the African of tender years still wag the fly-brush over our perplexed heads.

No housekeeper, I contend, ever felt any sympathy for Uncle Toby's much-vaunted sentiment: "There is room enough in the world for thee and me." We are all at issue with him on this very point. There is not room enough in the world, O fly! for thee and me. Between us it shall be only war, and that continually.

Before an answer can arrive, fly-time will be over. Let it rest, then, till next March, and ere the first blue-fly buzzes in my ear I shall expect it.

EMILY.

Windholme, Pa., Sept. 8, 1857.

PICKLING EGGS.

As our readers well understand by this time, we advocate the plan of keeping fowls in such a manner that they will produce fresh eggs the year round. This they will do in the coldest weather, if kept in a warm, clean place, and supplied with unfrozen earth, gravel and lime. They must also be fed with flesh food to make up for the lack of animal food which they gather in warm weather in the form of insects of various kinds. Fish, or refuse meat of any kind will be devoured greedily by them. Milk curd, sour or even sweet milk can be substituted for meat, or may be given with it. But many persons fail to secure the necessary conditions for an abundant supply of fresh eggs, and it is often desirable to pack them not only for future home use, but also for transportation to distant markets. The best recipe we can give is the following, which some of our friends have employed with entire success, their eggs having kept perfectly through a whole year or more: Procure a water-tight firkin, tub, cask or barrel, according to the amount to be put down. Pack in sound eggs (examined as below) setting them with the small end downward. When all the eggs on hand at any time are packed, cover them with a pickle made by dissolving in four gallons of water, two quarts of unslacked lime and two quarts of salt. The water will not dissolve all the lime, but the pickle should be made two or three days before it is wanted, and be frequently stirred. The milky liquid is to be poured off to be put upon the eggs. The cask must be set in a cool place, but not where it will freeze in winter. Eggs are now (Sept. 10th.) worth 15@16 cents per dozen in this market, and now is a good time to provide for next winter when they will cost 3 to 6 cents a piece, judging from two or three winters past.

TESTING EGGS is a very simple process. Take them into a dark or partially darkened room, and hold them between the eye and a lighted candle. If good the light will shine through them with a uniform reddish glow. Every one should use this simple test before buying eggs, or breaking them for cooking. A dozen can be examined in two minutes by the merest novice.

GLASS NEST EGGS.

These are a recent 'invention,' which may not have been seen by many persons. They are made of white glass, and of so nearly the shape and appearance of an egg as to deceive not only feathered, but sometime unfeathered bipeds. At least, we saw a bonneted "Biddy" call at an agricultural warehouse recently, and noticing a lot of the glass things, she inquired "what they asked a dozen for eggs?" These are very convenient nest eggs for cold weather, as they are

easily kept clean, are broken with difficulty, are not devoured by animals of any kind, and they are equally as good as a *bona fide* egg in the nest. They are, or should be, on sale at six cents each, or fifty cents a dozen, wherever agricultural apparatus is kept.

FOR THE BOYS AND GIRLS ONLY.

FARMERS' GIRLS.

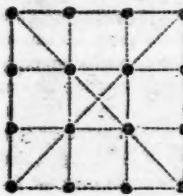
[A counterpart to "Farmers' Boys," on page 42, of this volume.]

Up early in the morning, just at the peep of day,
Straining the milk in the dairy, turning the cows away;
Sweeping the floor in the kitchen, making the beds up stairs;
Washing the breakfast dishes, dusting the parlor chairs;
Brushing crumbs from the pantry, hunting forelegs in the barn;
Cleaning the turnips for dinner, spinning the stocking yarn;
Spreading the white linen down on the bushes below,
Ransacking every meadow, where the red strawberries grow;
Starching the "fixens" for Sunday, churning the snowy cream,
Rinsing the pails and strainer down in the running stream,
Feeding the geese and turkeys, making the pumpkin pies,
Joggling the little one's cradle, driving away the flies;
Grace in every motion, music in every tone,
Beauty of form and feature thousands might covet to own,
Cheeks that rival Spring roses, teeth the whitest of pearls—
One of those country maids is worth a score of your city girls.

ANSWERS TO PROBLEMS.

We present a list of answers received up to Sept. 17.

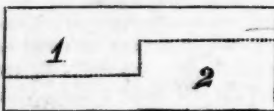
Prob. 7.—Trees; 10 rows with 4 in the row.



This is a very simple arrangement, but, just as we expected would be the case, a good many boys and girls have tried hard to get something difficult out of it, as is shown by lots of odd figures sent in. These attempts remind us of one who told a company they could not spell cat as he would write it. They all tried their hands, or tongues at it, thus: kat, katt, catt, eagt, kaght, cattie, kattie, caghte, kaghte, caat, kaat, caaght, caate, kaate, caaghte, caitt, kaitte, caightte, &c., &c., and finally they all gave up, and asked him he would spell it. His answer was—c-a-t.

Drawings of the orchard, as engraved above, were sent in by J. R., Albany, N. Y.; Serenus Raesly, Northampton Co., Pa.; Aaron B. Huffman, Hunterdon County, N. J.; David Ellsworth, Hartford Co., Conn.; "Yankee," Bloomfield, N. Y.; Chas. Reed, Alleghany Co., Pa.; Hannah Parry, Burlington Co., N. J.; Chas. M. Foulke, Bucks Co., Pa.; "Fourteen," Auburn, N. H. (2 answers); Gilbert E. Sherman, Penn.; Joseph H. Simpson, Bureau Co., Ill.; Chas. Lamkin, Jr., Seneca Co., O.; R. C. Fulton, New Perry, Penn.; N. C. Mitchell, Magog, Canada East, (one of the prettiest drawings received); Martin Stewart, Schoharie Co., N. Y., (beautifully drawn); Thomas J. Haile and Chas. B. Billingsley, Baltimore Co., Md.; Norman Lounsbury, Tioga Co., N. Y.; Robert Aiton, New-York City; Emily Lyon, Walworth Co., Wis., (both problems well done). Several other ingenious solutions with drawings, (which came too late to be engraved,) were contributed by "Fourteen"; Wm. L. Lamborn, Lancaster Co., Penn., (quite pretty); Thos. J. Haile and Chas. B. Billingsley, &c.

Prob. 8.—To make a board 3 by 8 feet fit an opening 2 by 12 feet, with only one cutting.



These drawings were sent by each of the following: Serenus Raesly; W. T. Lord and E. M. Perry, Hartford Co., Conn.; Aaron B. Huffman; "Yankee," P. B. N., N. Y. City; Chas. M. Foulke; Geo. A. Thomas, Cattaraugus Co., N. Y.; "Fourteen," Joseph H. Simpson; N. C. Mitchell, Magog, C. E., Martin Stewart, Fultonham, N. Y.; Emily A. Lyon, Darien, Wis. A number of the above sent paper models of the board cut as required.

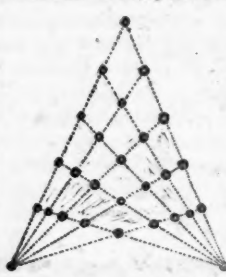
Prob. 9.—Six weights to weigh any number from 1 to 360.

Answer—1, 3, 9, 27, 81, 243, by "Yankee," Bloomfield, N. Y.; Robert Aiton, N. Y. City.

As stated in last paper, Master "fourteen" sent a draw-

ing giving more than asked for. A number of boys and girls have sent in solutions. We will call this

Prob. 10.—27 trees; 10 rows with 6 in a row.



Oswego, N. Y.; D. M., Me.; D. M. Goodrich; Wm. P. Marcheron, Iowa, and others.

NEW PROBLEMS TO BE ANSWERED.

A large variety of new problems have been contributed by our young friends, from which we can select only a few. We have had about enough of orchard problems for the present, and after those given below we shall only insert now and then one of especial interest of this kind. We are looking ahead for more time to devote to chapters of special interest to boys and girls, on a variety of instructive and entertaining topics. Next Summer, if not before, our young readers may expect particular attention.

Prob. 11.—By "Rusticus," Morrow Co., Ohio. A Florist planted 31 varieties of flowers (only one of each kind,) so that he had one circle containing 18 varieties; 7 circles with 6 varieties in each; 6 straight rows with 6 varieties in each; and 3 straight rows with 6 varieties in each. This makes a pretty, circular bed, if so arranged that small plants are set where they come nearest together. How shall they be set? We will give an engraving in our next of the best drawing received.

Prob. 12.—By Serenus Raesly, Northampton Co., Pa. There are two equal circles, each containing an area of 1963 square feet. The centers of these circles are 30 feet apart. What will be the cost of paving with pebbles the space between them; that is the space enclosed by two lines drawn to touch the outside of the two circles, not including any of the ground in the circles themselves; the cost of the paving to be reckoned at 41 cents per square yard?

Prob. 13.—Suppose all the gold obtained from both California and Australia, to amount to \$500,000,000, how large a box would it take to put it all into, supposing gold to be worth \$18 per avoirdupois ounce, and reckoning it to be 194 times heavier than the same bulk of water. A solid or cubic foot of water weighs 62½ pounds.

Prob. 14.—By Chas. M. Foulke, Penn. To plant 11 trees in 11 rows, with 3 trees in each row.

Prob. 15.—By "Young Egyptian," Southern Illinois. To plant 9 trees in 10 rows, with 3 trees in each row.

Prob. 16.—By the same. To plant 15 trees in 16 rows, with 3 trees in each row, and also to have 2 rows with 4 trees each, and 2 of 7 trees each.

Prob. 17.—Sent by "Yankee," Bloomfield. To form a square made up of 64 smaller squares, (8 each way,) and to place in them the numbers from 1 to 64, so that each column shall add up just 260. This is not new to us, but may be to many of our young readers.

Prob. 18.—By D. M., Maine. How much wheat shall I carry to mill, in order to bring back 10 bushels after being tolled one-tenth?

☞ No problems accepted without answers accompanying.

Corn—An Agricultural Song.

Tune—Sparkling and Bright.

Composed and Sung at a "Husking-Bee."

ED. AMERICAN AGRICULTURIST.—I send you this rural song which may serve

"To steal unfelt the tedious time away."

Better than gold is our corn ten fold
From the fertile earth advancing,
"Twill give you health and bring you wealth,
Your happiness enhancing.

Then husk your corn before 'tis morn
For the pumpkin pie is waiting,
And fill your maw 'tis Nature's law
To give yourselves a baiting

With it we make a Johnny cake,
Or roast, or fry, or griddle,
And puddings good, be it understood,
Are stirred up with a paddle.

Then husk your corn, &c

When it is green, as we have seen,
'Tis first-rate boiled or roasted,
And when 'tis dry who dare deny
'Tis quite good popped or toasted.

Then husk your corn, &c.

Turkeys and hens count it by tens,
And never stop to taste it

And ducks and geese, a pint a piece,
A bushel they'll soon waste it.

Then husk your corn, &c

Squirrels by day, red, black and gray,
To store it in their "eries,"
No questions make for conscience sake
But snatch it like the furies.

Then husk your corn, &c

The brave chirpmuck with right good pluck
Round it you'll see him lurking,
With pouting lip he'll seldom chirp
Or talk like boys while working.

Then husk your corn, &c.

At mid of night with much delight,
Old Bruin filled his basket,
By light of moon the knowing coon
He ate it as he husked it.

Then husk your corn, &c

The grunTERS all both great and small
Will squeal to hear it rattle,
And then 'tis good as any food
For horses, sheep or cattle.

Then husk your corn, &c.

REMSEN, Oneida Co., 1857. JOHN D. TEFFT.

OUR BASKET

Into which are thrown all sorts of paragraphs—such as NOTES AND REPLIES TO CORRESPONDENTS, with Useful or Interesting Extracts from their Letters, together with Gleanings of various kinds from various sources.

The Basket was heaping full Sept. 14th—a few items since received have been stowed in the "chinks." Letters for insertion or reference, are on hand from Phebe, Farmer's Wife, Gleaner, &c., &c., most or all of which will receive attention next month.

Drawings and Sketches Wanted.—We design to give more space hereafter to instructive cuts. These are expensive—engraver's work is costly—but we consider money well expended in them. We shall be obliged to all our readers who will send us original drawings or sketches of various objects of interest, such as buildings, trees, plants in short of every thing new, interesting and instructive, which can be better shown by pictures and words, than by words alone. From those contributed we must of course use our own discretion in regard to the most suitable to be published.

Cucumber Tree—Celery.—T. W. Rogers, of Adams Co., Ill.—The botanical name of the Wild Cucumber tree is "*Magnolia acuminata*." Full directions for raising Celery are given on page 183 of this volume. (August No.)

Honey Locust.—S. M. S., Miami, Co., O.—Plant Honey Locust (*Gleditsia triacanthus*), seeds in early Spring in nursery rows, and cultivate for two years at least previous to setting in the hedge.

Thorn—Walnut.—Our Western inquirer should plant both of these in the Fall. They may be planted in the ground at once or put in boxes of earth till next Spring. Thorns are often two years in vegetating. It is better to cultivate all hedge plants for two or three years in the nursery rows before planting in the hedge row.

Evergreens—Planting.—W. Thomas, Summit Co., O. Fall is not as favorable as Spring for planting evergreens: This question has been several times answered. See pages 98, 109, and 195, of this volume.

Fall Planting of Small Fruits.—Frank A. Griffin, Rock Island Co., Ill. Blackberry and Raspberry plants are best set out in Autumn, as soon as the leaves are wilted by frost. The same may be said of currants, gooseberries, and kindred shrubs where rooted plants are to be transplanted. If cuttings are to be set out, the early Spring season is best for putting them into the ground. The cuttings may be made at any time between the last of November and first of March, except at the South, where cutting should not be prolonged beyond the middle of January. Cuttings may be kept, from time of making to setting, buried in dryish sand in the cellar. Blackberry and raspberry plants are propagated by rooted off-shoots, and not by cuttings.

More Strawberries.—Wm. P. Tompkins, of Scarsdale, Westchester Co., N. Y., informs us that he picked, the present year 187 quarts of Strawberries from a plot measuring only 24 square rods (or 715 square feet). The berries were mostly measured after being assorted and prepared for the table. This is at the rate of 69 quarts, or 2 bushels and 4 quarts to the square rod. These were on two plots; one 5 by 35 feet. Mr. T.'s, first attempt at Strawberry culture, was set May, 1855, in 5 rows, and the plants 7 inches apart in the row; the other, 12 by 45 feet, set in September, 1855, rows 16 inches apart, and plants 10 inches from each other in the row. They were covered the following Winter with 3 to 4 inches of dry leaves. The soil light, dry and sandy, with hard coarse gravel, 18 inches below the surface. The ground has only been in use four or five years as a garden, but lightly

manured, and dug only 10 to 12 inches in depth. Mr. T. estimates the cost of picking worth at least \$1 per bushel, besides the labor of cultivation. The varieties he thinks were mostly the Boston Pine, with a few Hovey's Seedlings, and two other varieties. Large berries would not cost so much to pick.

Strawberries—Hybridizing.—J. G. Marchant Adams Co., Ill. The strawberry is not usually a dioecious plant. Some varieties, however, have stamens and pistils on the same flower, others have pistils alone—rarely does a plant have only stamens. The seed and not the berry is affected by dusting the pollen of one variety upon the pistils of another. Seed planted from such fruit will produce a hybrid. A particular variety can only be propagated with runners or division of roots. The seeds from a single stalk will produce a dozen or more varieties.

Raspberries.—Sept. 11th, we received from Chas. W. Elliott, Esq., a bunch of Raspberry plants, heavily loaded with fruit in all stages of growth from the just closing flowers to fully ripe berries. A box of the just gathered fruit accompanied the plants. The fruit is of moderate size, rather above the wild varieties, and of good flavor. Berry, nearly round, red color. Mr. Elliott calls it the "Bagley Everbearing," and says it is hardy, needing no covering, and yields a moderate succession through the season. The plants before us indicate that it will continue bearing until stopped by frost.

Ground or Winter Cherry.—Reuben T. Osterlander, of Geneva, Walworth Co., Wis., offers to send enough seed for a small plot to any reader of the *Agriculturist* who will forward a directed and post-paid envelope—so far as his crop will go. He has both yellow and blue varieties.

Cheap Fruit.—An American writing from Gibraltar, says: "I bought two pounds of Grapes, two of Apples, two pounds of Peaches, two of Lemons, and a basket to carry them in, and all for a quarter of a dollar."

Grapes at the North.—Wm. Pringle, of Markham, Canada West, will find the Concord Grape, sufficiently hardy for his latitude; it ripens its fruit several days earlier than the Isabella, and is hardy. The Clinton is also well adapted to cold climates and short seasons. The Canadian Chief is a new Grape for which large claims of hardiness and good quality are made. A season or two will decide the question.

Sugar-Cane Suckers.—T. R. J., Jr., Accomac Co., Va. The suckers spring directly from the stumps of plants cut down early in the season, as will be seen on close examination, and they may be treated in all respects like the original stalk, if forward enough to ripen. They cannot injure the old roots, as these will not be needed next year, it being advisable to cultivate this plant as an annual—sowing new seed every year. When not badly frozen, the roots will send up new shoots a second year, but according to the experiments in France and in Africa, the second year's canes are very slender.

Chinese Sugar-Cane in Va.—R. Sherman, of Prince George Co., Va., writes that on the 17 he visited a friend in Dinwiddie Co., who planted 4 ounces of seed, from which he made three barrels of excellent syrup, and two barrels of vinegar from the skimmings, and the hogs eat the stalks after the juice was expressed. Amount of ground not stated.

Cold Frames.—J. M., Eppey, Pa. See page 219.

Onions, Keeping, &c.—D. J. Weller, Bullett Co., Ky. Onions should be kept during Winter in a cool, dry situation away from frost. If placed in a warm room they commence growing and soon decay. They will retain their freshness for a long time if put in barrels with dry sand sifted in among them. Sets may be kept in the same manner.

Beet Sugar.—Benj. Butterfield, Will Co., Ill. The manufacture of this is now not attempted in this country. It will not pay unless on a large scale, as in France, with extensive works and much experience and skill.

Manures for Long Island.—W. I. Gould, of Suffolk Co., L. I., asks "what is the best manures for Old Long Island." This question is about as indefinite as to ask what is the best medicine for a sick man without naming his disease. Long Island has almost every variety of soil, and what would be good in one would be worthless or injurious in another. As in medicines, so in manures, there has been a great amount of humbug in setting forth some specific or cure-all. Thus Brandreth's Pills have been recommended as being always good for about every disease that flesh is heir to. So certain manures have been recommended as universally beneficial. This is all wrong. On a heavy, damp, cold, sandy soil, lime is usually beneficial. On a clay soil sand is often a good application, while on many sandy soils, clay is the best possible application. On some compara-

tively poor soils of Long Island fish produce almost miraculous effects. If we could recommend but one manure for all kinds of soil it would be good stable manure before all things else. With this we would mix all the muck or swamp mud possible, in all cases. Guano, if genuine Peruvian, is very good almost everywhere. Bone dust, finely ground, is also good anywhere.

Decayed Leaves—Saw-Dust.—Junius May, Davis Co., Ky. These are of a character similar to muck, and are equally good for composting with manure. Saw-dust is useful, especially as an absorbent, but not as valuable as muck and leaves; the latter decay more readily, and also contain more nitrogen or ammonia.

Arboricultural Works.—S. S. W., of Lancaster Co., P., asks what books we recommend for instruction in the culture of ornamental and forest trees. There is a deficiency in this class of literature which we would be glad to see supplied. "Loudon's Encyclopedia of Plants," is too voluminous and expensive (selling at \$17) for general use. "Meehan's American Hand-Book of Ornamental Trees," is not sufficiently explicit, or extensive. It is a small work, selling for 75 cents, and if one only wishes for a description of ornamental trees this will be of service to him.

Winter Management of Bees.—Many different modes of protecting bees during the Winter have been recommended and tried. J. M. M., of Schuyler Co., as the result of more than twenty years' experience, advocates the plan of burying the hives in the ground. He digs a ditch in a gravel or loam soil, deep enough to bring the top of the hive, when resting on scantlings, even with the surface of the ground. He covers the bottom of the pit with straw, and packs eight or ten inches of straw or litter around, between and upon the hive, and finally heaps up the dirt taken from the trench, making a furrow if necessary to carry off the surface water. Here he leaves the bees from the 1st of October until they can get a living in the Spring, with a saving, as he thinks, of two-thirds of the honey which they would consume if left unprotected. There is undoubtedly a saving of honey when bees are kept in perfect repose, and are protected against sudden excessive changes of temperature. It is a nice matter, however, for inexperienced persons to decide when to carry bees into Winter quarters, and especially when to bring them out again to the open air. The great difficulty with Mr. M.'s plan seems to us to be that it does not provide sufficiently for the ventilation of the hives, and for keeping them dry by ventilation. We should expect to find the combs black and mouldy after such treatment, even if the bees lived; and we are inclined to think that the most essential thing, so far as protection against extreme cold is concerned, is upward ventilation sufficient to carry off all the vapor of the air.

Bee Moths.—See page 164. (July No.)

Gapes in Chickens.—Samuel Lowery, of Nashville, Tenn., writes that he is sure the cause of the gapes is a little red worm in the throat which must be removed. His 'best half' has cured a great many thus: "Double a horse-hair; put it down the throat of the fowl, and twist it round, and then pull it out. It will bring out the worm, and if its stay has not been too long there, a cure will be effected." Mr. L. thinks the various remedies proposed, such as, red and black pepper, salt, powders, &c., have only been of temporary service "in strengthening and stimulating the fowl and momentarily neutralizing its sensibility."

Hog Cholera.—Wilton, Alleghany Co. We, and all others, are as much in the dark as yourself on this point. The best specific we have heard is, to keep the animals clean, and give an occasional dose of salt. Dr. Dadd, Vet. Surgeon, recommends "mixing equal parts of salt, powdered charcoal and sulphur, giving each animal a table-spoonful with its food twice a day; keep clean and warm."

Crops in Miami Co., O.—A correspondent writes: Sept. 14, "Wheat, oats and flax, have been gathered to exceed any former year. The Corn crop in the Miami Valley is tremendous; there never was as much in any former year, and many farmers are calculating on 120 to 135 bushels per acre. Stock hogs are selling on foot at \$5.75, per 100 lbs. gross weight."

Maine Items.—We extract the following items from a letter from Mr. Wm. P. Atherton, of Hallowell: The Summer wet and unfavorable, but an abundant yield of most kinds of produce, especially of hay. Grain good, except on low wet land. More wheat and barley sown than usual. The two-rowed barley considered best, is taller, yields better, is cleaner, and ripens later, at a time when it can be harvested conveniently. Weevil (midge) and rust somewhat injurious. A new kind of wheat, called the Java or Egyptian, promises well. Mr. Tabor, of Vassalboro, obtained 28 bushels to the acre. Corn and potatoes promise well; not much complaint of rot up to

Aug. 29. Apples scarce; fruit trees badly injured last Winter. Season too wet and cold for the Chinese Sugar Cane.

White Rye.—We have received two samples of this, one from Wm. B. Doubleday, Binghamton, N. Y. the other from Phillip A. Mason, near Blackwood Town, Camden Co., N. J. They are both very fine, and if this variety grows true to its kind, and is equally hardy and productive with that heretofore cultivated, we see no reason why it should not wholly take its place. The heads received from Camden Co., are long, and well filled with plump kernels. Mr. Doubleday, says, "Myself and family prefer the rye bread (of the white variety) to that made from the best superfine wheat flour we can procure. It is lighter, more moist, and sweeter, and I think more wholesome."

Hungarian Grass—Millet.—Taber & Nettleton, Decatur, Ill. The seed you sent under the above name is not a grass but a millet. From an examination we think it the German or Hungarian variety, (*Panicum Germanicum*), which is an annual, and of course will not make a permanent stand like grass. It is a valuable forage crop, requiring the same treatment as the common millet.

Tall Corn in Illinois.—In a postscript to a letter, dated Sept. 4, Messrs. Taber & Nettleton, of Decatur, Macon Co., say: "We have 1 acre of Chinese Sugar Cane already averaging 12 feet in height; corn from 16 to 18 feet—can't reach the ears. Fact—Illinois to the last."

Large Yield of Flax Seed.—A Challenge—David Mitchell, of Piqua, Miami Co., O., writes: "My son D. S. Mitchell, 24 miles South of this place, sowed one bushel and 41 lbs. of flax seed last Spring, (on how much ground?) and harvested seventy-nine bushels and 44 lbs. Seed loaned from Messrs. Ball's Oil-Mill, near Piqua and the crop purchased by them at \$1 per bushel. They will certify this statement. Beat this who can."

Potato Rot.—L. Humphrey, of Windham, Ohio, advises gathering potato balls (seed) now, drying carefully and planting in drills next Spring. He thinks that new varieties may be produced in two or three years which may be less subject to rot.

Judge Darling's Corn Outdone.—H. A. Sheldon, of Middlebury, Vt., writes that an old variety of sweet corn which has been in his Father's family for 40 years was planted by the side of the Darling on the same day, and the former matured a week first, and is the sweetest and tenderest. From most other places we hear a different report, though not from all. The weather has been so unusual the past season, that scarcely any new plant has had a fair chance to show its merits or demerits.

King Philip Corn—Premium Seeds Coming Back.—Hubert Greaves, of Sandusky County, Ohio, sends us ripe samples of the above corn, gathered Sept. 15th. He reports, "one bushel of ears from the little packet we sent him.... The corn is very fine, some of the ears measuring 14 inches long and 6½ inches round. It looks very poor by the side of our 14 feet high corn, but will pay to raise for the grain it shows."

Lyman Wilder, of Whiteside Co., Ind., writes that: "Away up here in the North Indiana woods, I planted the King Philip corn, June 1st, and on Sept. 1st, (3 months,) I had corn hard enough to grind." He suggests that by planting this variety on wheat ground, it will be out of the way by August 25th.

Ayreshire Cows.—E. Traver, Dutchess Co., N. Y. By looking at our advertising columns occasionally, you will find plenty of Ayreshire cattle advertised for sale, from which you can, no doubt, make good selections. The merits of the different kinds of cows have been so fully discussed in the pages of the *Agriculturist* heretofore, that it is unnecessary to say more of them now, when, perhaps, after all, it is chiefly a matter of taste or fancy that will govern the purchaser in his selections. In the "Rural Surroundings, No. 2, page 76, April No., will be found a description of Ayreshires, and other breeds. As to importing Ayreshires from Scotland, we think they can be obtained of equally good quality in this country—either in New-York, or Connecticut—and at half the cost of importing them. There have been so many good Ayreshires brought here from Scotland, and their descendants so frequently offered for sale at reasonable prices, that one need not hunt far nor long to obtain them.

Sterile Cows.—L. Barnet, of Springfield, says he has a very fine cow which he cannot get to breed, and that a reliable remedy would not only benefit him in particular, but stock raisers in general. The reasons why cows or heifers fail to breed are so various, that no certain answer can be given to the question. Free martens, that is heifers twinned with a bull, scarcely ever breed, from well known physiological reasons. Other heifers may

fail to breed from being kept from birth in too high condition, although this is not a common fault. When a heifer or cow is obstinate in not breeding, after freely receiving the male, we know of no better way than to reduce her condition, gradually, to a low state—poor even—and keep her so during repeated trials. If a series of months does not, with due attention on the part of a reasonably sure male, get her in calf, we should consider the case hopeless.

Hay Caps.—We took occasion to commend these pretty strongly at page 152, August No., as well as previously, and reports of their utility are often received from those who adopted our suggestions. Here is one of a number of like import. E. D. Newton, of Alleghany Co., N. Y., writes Sept. 7th, "...I ventured to try twenty hay caps this year, and although made from cloth of inferior quality, I am satisfied they have saved me double their cost. All my neighbors are unanimous in the opinion that they are excellent for a wet season..." Hay growers will do well to make a note of this matter, and next Winter, when they have leisure, turn back and read the descriptive article at page 152, and then make up a supply against next Summer's haying time.

Potato Digger.—"Subscriber," Wis. We cannot judge of the practical operation of your proposed machine from the rough sketch forwarded. You can best test it by building a machine and trying it. It may work on clean loose soil.

Connecticut Bushel.—By a recent act of the Conn. Legislature establishing the number of pounds in a bushel, Wheat is hereafter to be reckoned at 60 lbs. per bushel, Buckwheat at 48 lbs., Corn 56 lbs., Rye 56 lbs., Barley 45 lbs., Oats 32 lbs., Rye and Corn Meal 50 lbs., Beans and Peas 60 lbs., Beets of all kinds and Potatoes, 60 lbs., Common English Turnips 50 lbs., Ruta Bagas 60 lbs., Carrots 55 lbs., Onions 50 lbs., Parsneps 45 lbs.

Penn. Agricultural Journal.—Alex. F. Brown, Mercer Co., Pa.—Just such a paper as you describe, we hope to make the *American Agriculturist*. You will find much in the present volume, forwarded to your order, but this volume is not half of what the next one will be when we contemplate adding several pages even to its present size, and improving it in every respect. We are determined not only to equal but far excel any other paper published, whether for the farmers of Pennsylvania, or for those in any other state. We know of no such paper in Westchester, as the one you inquire for.

Wine Making.—J. M. Fishburn, of Rockbridge Co., Va., inquires for himself and others for a simple recipe for making wine on a small scale. Wine may be made from the Isabella and Catawba Grapes, on a small scale, by picking the bunches when fully ripe, and after sorting out any unsound or immature berries, put them in a tight box or barrel, and mash the pulp with a pounder, having the lower end square. Reduce the fruit in this manner to a fine mass, but do not break the seeds while pounding. Place the whole in a coarse bag or sack and submit it to pressure. If a cheese or portable cider press is at hand, make use of it, otherwise place the sack between planks and lay stones upon them. Leave in a moderately cool place for two or three days. When all the juice is expressed, which is usually from 12 to 15 quarts per bushel of grapes, put it in a clean sweet keg or barrel, filling within three or four inches of the bung, and leave for two or three weeks to ferment, when the wine becomes clear. Fill the cask full from some reserved for that purpose, tighten the bung, and place in a cool cellar until February or March, when it should be racked off into clean casks, kegs or bottles, entirely filling them, and bung or cork securely. In this condition it will improve by keeping. If the liquid is not perfectly clear after one racking, the process should be repeated, using perfectly clean casks, or thoroughly wash the old ones. It is better to omit the bottling until the wine is one year old, and then the heads of the corks should be coated with wax. Some add a little sugar to the juice, say one pound to each gallon, but with perfectly ripe *Catawbas* there is no necessity for this.

Tomato Wine.—Benj. Butterfield, Will Co., Ill.—Select and mash well ripened fruit; press out the juice; add 1 pint of water and 1 lb. sugar to each quart of juice. Set away in a partially filled vessel to ferment similarly to grape wine. After fermenting sufficiently put in tight kegs and keep in a cool dry cellar until Spring, when it may be carefully drawn off and bottled, adding a small piece of root ginger to each bottle. When opened for use a brisk effervescence takes place, and to one skilled, even in grape wines, it is difficult to distinguish its origin.

Fluid or Gas Lamps.—During the past month, we have used, upon our study table, one of "Andrew's Patent, Self-Generating Safety Gas Lamps,"—a pretty long name for a very simple and neat affair. We are pleased with the lamp, and inclined to think it superior to any one designed for burning fluid which we have previ-

ously seen. As we have formerly written (Vol. XIII p. 24), not one in a hundred of the reported "explosions" are explosions, but simply the firing of the fluid, by carelessly filling the lighted lamps, or breaking them. Andrew's lamp can scarcely be filled when lighted, and dropping it, or even moving it suddenly, puts out the flame, as we more than once proved by being left in total darkness. The common fluid is changed to gas, in an invisible wick, and burns with a clear flame.

Apple Slicer.—Sometime since we received from A. M. Collins & Co., of Philadelphia, Penn., one of "Pratt's Automaton Apple Slicers," and have waited the opinion of a Pie-Baker of our acquaintance as to its merits. He reports that it slices the apples finely when they are not too soft; if soft or tender, they break from the core before the last portion is cut up. A further trial of our own confirms this opinion. We call it an ingenious, and, on the whole, useful instrument.

Cider for Apple Butter.—We can scarcely give our Southern enquirer a definite rule for boiling down cider, as the strength required depends upon the length of time it is to be kept. Our method has been to take 6 to 12 gallons of cider for a bushel of Apples, boil down one half, put in the dressed apples and then boil down according to the time required to be kept, using the largest quantity of cider named, and most boiling for the best keeping sauce or "Apple Butter."

Green Corn Drying.—Stephen Culver, of Newark, N. Y., has applied for a patent for a new mode of drying green corn. The whole ear is divided lengthwise into quarters or smaller pieces, and the corn dried upon the pieces of cob without previous boiling. This is said to be a superior process, but we do not see exactly how or why it is so.

Green Corn Somp.—Our esteemed correspondent, "Edith," has furnished us with an interesting article on this subject, which we have not now room to present entire. The following is the substance: Take a dozen or more ears of corn and pass them gently over a common jack-plane, until the hulls are reached. Then scrape the cobs with the back of a knife, to remove the adhering parts, and put the shaved corn into a kettle containing four times its bulk of boiling water. Add a little salt, and stir the whole until it boils. Keep it boiling three or four hours over a slow fire. Let this be eaten with good rich milk, and it will prove a dish that the most fastidious cannot fail to relish.

Corn Starch.—J. R. C., of Council City, K. T., inquires for a method of making corn starch on a small scale for culinary use. Perhaps some subscriber can offer valuable suggestions on this topic. Usually it is cheaper to sell the corn and buy the starch, as it is much more cheaply made on a large scale, but in remote Western towns, where corn is cheap and transportation dear, it may sometimes be convenient to make a little home-made starch. We trust some one will reply, as we have neither experience nor observation on this point.

Cooking Summer Squash.—"Edith" suggests the following: Place the squashes whole in boiling water. When soft, spread a cloth over a colander and put them into it; cut open, scrape out the seeds and scoop out the pulp from the rind. Mash them finely, pressing out all the water. Season with butter, pepper and salt. After which we recommend to put them into a sauce-pan, to be re-heated, to make them still dryer before serving upon the table.

Pickling Tomatoes and Peaches.—Mrs. M. A. H. Rowe, of East Chatham, sends the following items from her own successful experience: **Tomatoes**—Put them, full grown but unripe, into weak brine. After nine days remove them, slice thin and put into a kettle of water with one ounce of alum to one peck of tomatoes, and heat to a boiling point. Then take them out and put into jars, or a sweet oak tub, with one ounce each of ground cinnamon, cloves and allspice, and one pound of sugar, (to 1 peck?) with vinegar enough to cover them. Spice and sugar each layer as put in. **Peaches**—Wipe off the down with a wet cloth; stick 4 cloves in each; lay them in jars and pour over them a boiling hot syrup made of 1 quart of vinegar, 3 pounds sugar, 1 ounce cinnamon, and a few kernels allspice. After 24 hours, pour off the pickle, heat and return it. In 24 hours more heat the liquor again, and the pickles will then keep without trouble. Plums and cherries are nice when treated in the same way. Pears, quinces and apples, pared, cored and boiled until tender, and then treated as described for peaches, are excellent.

Half-Price.—A Western paper offers to add Mr. or Esq. to the names of such subscribers as will pay 25 cents a year for the extra handle to their names. For 50 cents he will put on both handles thus: Mr. Peter Nobody Esq. N. B.—We have a mail clerk who offers to do this for half-price. Who speaks first?

Resin Soap.—J. H., of Henry Co., Ill. Resin, (incorrectly called Rosin,) is used as a partial substitute for grease in soap-making, the proportion depending upon the quality of soap desired. The proportion is usually one-fourth to one-third of as many pounds of resin as of tallow. The resin, pounded fine, is added at the last boiling before hardening the soap. The process, however, is an art to be learned by practice, and like any other manufacture, to be done well requires a full knowledge of the minute particulars. J. H. will find a long article on soaps in "Ure's Dictionary of Arts, Manufactures, &c."

A Cellar 'up Stairs.—H. A. Sheldon, of Middlebury, Vt., recommends those without the conveniences of an under ground cellar, the following substitute: "Take a box of any convenient size and set it within another of similar form, but enough larger to admit a layer of dry sawdust four or five inches in thickness to be closely packed between the two, both at the bottom and sides. There may be a cover on both boxes, or only one on the outside box. In a room having a fire by day, such a box will keep vegetables enough for a small family during a month or so, which will be a great convenience to those living at a distance from market. In very cold weather the box may be left open during the day." It will also do for a Summer ice-chest, by putting the ice in, in some water-tight vessel.—Ed.

Fencing.—A. Skean. Your article is on file for examination in connection with other letters called for elsewhere in this number. We have not your P. O. address or we should have written you privately.

Flower Seeds for Ladies.—Mrs. Adaline Fletcher, Tarcross, Wis. The seeds you refer to will be offered in our list for Annual Distribution, to be published in December or January. We do not ask exchange seeds or pay. We have no seeds to sell, but distribute free to our subscribers all good seed we get hold of.

Western Money.

TO PERSONS REMITTING MONEY.

Since the failure of John Thompson, the Money Broker, we have been subject to all sorts of shaves on any Western money received—often 15 to 20 cents on the dollar, on bills perfectly good at home. Will our Western and Southern friends in remitting money for subscriptions, please send Eastern Bills or gold, or else 3-cent post-office stamps, when possible to obtain them. This will be of great value to us, while the present disturbance in the money market lasts. We will return a paper that will require no "discount" anywhere.

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What of the Chinese Sugar Cane?

Every day's mail now brings us a number of reports—many times too numerous for publication. These are mostly encouraging as to the present growth and prospects of the crop, but we consider a decisive judgment upon its merits as yet premature, that is, as respects its profitable adaptation to sugar-making at the North. That it is valuable as a forage crop, in any place where Indian Corn will grow, may be considered a fixed fact. Abundant experiments will be made during this month, with sufficient accuracy to show how far north it will be available for sugar or syrup. In the Southern States, success has already attended the efforts of those who have tried it for making sweetening in the form of syrup. A planter in Texas sent 65 casks of Chinese Sugar-Cane Syrup to the New-Orleans market, where it commanded a high price, for its good quality. Similar reports come from other Southern localities.

Our own crop is far exceeding our expectations, which were not very hopeful, as a part was planted just before the long May rains, and a part after, or not till June. The last planted stands now nearly or quite 14 to 15 feet high over the field. It will probably be ready for grinding about Oct. 10, or before.

From the Northern Counties of Ohio, Indiana, Illinois and Iowa, and from some points in Michigan and Wisconsin, we also learn, by letters recently received, that the cane is making a prodigious growth, in many cases standing 14 to 17 or 18 feet in height. From the Northern Counties of New-England and New-York, and from Canada East, the reports are various. The past season has been unpropitious to say the least. The Spring was so wet and late that the average time of planting was, perhaps, not until about the first work in June. This, with a general frost the first week of October, would scarcely give time for the ripening of the seed. In some places the plants were actually killed by the very unusual frost of Sept. 9th. Two or three weeks earlier planting, as in ordinary years, would have materially improved the chance of the crop.

Leaving actual experiments this month to decide its value for the production of sweetening, we wish to gather some general and systematic information in regard to the growth of the Chinese Sugar Cane. To accomplish this, we invite short, definite answers to the following queries. Will our readers in the various sections please note down their answers, using the numbers instead of repeating the question:

1, Name of experimenter—2, State—3, County—4, Soil—5, Manure—6, Month, and about the day of planting—7, Month and about the day of heading out—8, Average height at time of heading out—9, Month, and about the day of ripening of the seed—10, Average height at time of ripening—11, Average diameter of ripening stalks and canes, say one foot from the ground.

These may be answered in this form: 1, Samuel Glover—2, N. Y.—3, St. Lawrence Co.—4, clay loam—5, barnyard manure—6, May 21—7, Sept. 16—8, 9 feet—9, Oct. 14—10, 12 feet—11, 1 1/2 inches.

If any question cannot be answered, put down the number and leave a blank. Against No. 9, write "killed by frost," with the date when this happened, if before the seeds were brown.

If, out of the many thousands who received seed from this office, a few hundred persons, in as many counties and in the different States and the Canadas, would write out and send us a series of answers such as we have indicated in italics above, we could make up and publish a table which would be of very general interest and value. Who will assist in this matter? Let us have both sides—the truth is what we are after.

NOTE.—As various grades and qualities of seed were sold last Spring, we only invite answers from those who received seeds from our office, all of which we tested, and know to have been of good quality.

A Cheap Wooden Sugar Mill.

Just as we go to press, our Ohio correspondent furnishes the following description of his mill: "I sawed off two 10-inch logs, 8 feet long. These I set 4 feet in the ground, and 4 feet apart, making them firm by stones filled in. Two feet from the ground I sawed a notch, half way through each log on the inside, and fitted in a plank 3 inches thick, and 13 inches wide. In this bottom piece I made two holes for the lower ends of the rollers, which were made of smooth hickory logs, trimmed round and smooth with a draw-shave. The lower end of each was fitted into the lower holes, with a gudgeon. Two feet from this, I cut a collar, or rather neck in the roller, the lower side of which corresponded with the upper end of the upright logs. I next fitted two pieces of plank, 6-inches wide, to the top of the posts, cutting out semi-circles on the inside of each, to fit into the necks of the rollers. These upper planks are spiked down upon the top ends of the logs, and hold the rollers in place. One of the rollers projects above the upper beam about 2 feet, and into

this is fitted a long lever, the outer end slanting down. To this I attach a horse, though a man can easily turn it. I am now pressing out the juice finely and boiling down the syrup in our maple sugar kettles. We save all the scum to make vinegar from. Will it not make good vinegar? [We should say yes.—Ed.] The rollers have spread apart a little at the top, but any canes that get through without being pressed dry, we pick up and put through again in some tighter place. We should have to put iron collars on the necks of the rollers if we had five acres to grind. The lever split out the mortice in the roller the first hour's working, but I got the blacksmith to put on two strong iron bands one above and the other below the entering of the lever, and it has since stood well. The greatest trouble is, that one of the rollers often stops, and the other slips on the cane, when we have to back the horse and put the cane in at a new place. Were I to make a new wooden mill, I would fit in wooden cogs like the old fashioned cider mill to make both turn together. But I shall next year have a larger crop, and get an iron mill."

Back Numbers of the Present Volume.

We are very frequently printing extra editions of this Volume, back to January, to supply new subscribers coming in from time to time, many of whom wish to go back to the beginning of the Volume. Let it be understood, then, that those subscribing in July, or at other periods, can at any time order the back numbers of this Volume.

With a single exception, the actual regular circulation of the *Agriculturist* to subscribers is about **Fifteen Thousand greater** than that of any other Journal in the World devoted to Agriculture and Horticulture only.

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Fruit and Ornamental Trees for Sale.
THE SUBSCRIBER WOULD CALL
 attention the coming season to his large stock of Peach and other fruit trees, embracing Apple, Pear and Cherry, both Dwarf and Standard, of extra and medium sizes. Also Apricots, Almonds, Plums, Quinces, &c., with a large stock of Evergreen and Deciduous trees, suitable for ornamenting grounds, at reasonable prices; and 30,000 two years growth Silver Maple seedlings, and other Nursery stock.
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 The subscribers would invite attention to their Nursery stock, consisting of:
 100,000 Apple trees from 2 to 5 years from the bud or graft;
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Cranberry Plants.
 Circulars relating to Culture, Price, &c., furnished to applicants.
NEW-ROCHELLE BLACKBERRY:
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TRUE RED ANTWERP do.
GRAPE VINES (1 year old plants) of Isabella and Catawba varieties.
 All the above for wholesale and retail, at the lowest prices, by **F. TROWBRIDGE,**
 Dealer in Trees, Shrubs, Plants, Roses, &c.,
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MORRISTOWN NURSERIES.
 Fruit and Ornamental Trees, vigorous and thrifty. For vigor and beauty of growth, nowhere excelled. 50,000 New Jersey Peach Trees, at wholesale. Extra Pear and Cherry Trees; Mazz Cherry Seed; Mazz Cherry Stocks, very strong; Norway Maple Seed; Sugar Maple Seed; Quince and Pear Seed; Peach Seed, superior and healthy, &c. &c. Catalogues sent free to all applicants inclosing a 1-cent stamp. **WM. DAY, Morristown, N. J.**

LINNEUS RHUBARB.
PARSONS & CO.,
 FLUSHING, NEAR NEW-YORK.
OFFER FOR SALE THIS SUPERIOR
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ISABELLA AND CATAWBA GRAPE
 Vines, of proper age for forming Vineyards, cultivated from, and containing all the good qualities which the most improved cultivation for over sixteen years has conferred on the Croton Point Vineyards, are offered to the public. Those who may purchase will receive such instructions for four years, as will enable them to cultivate the Grape with entire success, provided their locality is not too far north.
 All communications addressed to **R. T. UNDERHILL, M. D.,** New-York, or Croton Point, Westchester County, N. Y., will receive attention.
 The additional experience of the past four seasons gives him full assurance that, by improved cultivation, pruning, &c., a crop of good fruit can be obtained every year, in most of the Northern, all of the Middle, Western and Southern States.
 N. B.—To those who take sufficient to plant six acres, as he directs, he will, when they commence bearing, furnish the owner with one of his Vine-dressers, whom he has instructed in his mode of cultivation, and he will do all the labor of the vineyard, and insure the most perfect success. The only charge, a reasonable compensation for the labor.
 Also, **APPLE-QUINCE TREES**, (which are sometimes called the Orange Quince), for sale as above. **R. T. U.**

REBECCA GRAPE VINES FOR SALE.
 This choice variety is an American seedling, and a **HARDY WHITE GRAPE**, of an excellence long sought for, but never before found. Its time of ripening is a week or ten days **EARLIER THAN THE ISABELLA**, and far surpassing that and every other native variety as a table grape. The vine is a thrifty grower, fruit of medium size; color greenish white, tinged with amber in the sun; flesh very juicy, soft and melting, with tender pulp; flavor rich, sugary, vinous and brisk, with a peculiar luscious aroma distinct from any other grape, and continues in use long after it is ripe, without shriveling, which renders it well adapted for transportation. It has received **THE FIRST PREMIUMS** from several of the largest and best Horticultural Societies in this country.
 Good strong vines, one year old, propagated from the original vine, ready for delivery by the 15th of October. Price \$3 each, or \$24 per dozen. **WM. BROCKSBANK,**
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ISABELLA AND CATAWBA GRAPE VINES FOR SALE. for forming vineyards, of two, three, and four years old.
SIDNEY E. VAN WYCK,
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"People kill themselves by eating, by drinking, by labor, by sleep, by want of sleep, by sexual excess by taxation of brain, by money-making and spending, by extended violation of physical law, in almost every direction. Now THE WATER-CURE JOURNAL contemplates a rectification of the general habits of the people in all cases where correction is needful."—**DR. JACOBUS.**

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Offer for sale an assortment of Trees and Plants which they have grown for the use of amateurs, and have prepared, by frequent transplanting and other modes, for success in moving. They are of fine size and symmetrical form, and among them will be found:

STANDARD APPLES of fine quality.
STANDARD PEARS, PLUMS and CHERRIES.
PEACHES, APRICOTS and NECTARINES, on plum stocks and their own roots.

DWARF PEARS of fine form, and ready for bearing.
GOOSEBERRIES and CURRANTS, strong plants of the best sorts.
RASPBERRIES—**FÄSTOLF, RED ANTWERP, FILLBASKET**, and other known sorts.

STRAWBERRIES—all the best varieties.
NATIVE GRAPES—**ISABELLA, CATAWBA**, and other hardy varieties.

FOREIGN GRAPES—All the well-known sorts, with some new varieties of great excellence. These plants are propagated from vines that have borne abundantly for some years, and are known to be correct.
 Great care is taken in the cultivation of Fruit trees, and none but those of the best quality are allowed to be sent out.

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 Contains Trees of all sizes for lawns and streets, including *Elm, Silver, Norway and Sycamore Maples, Catalpas, Lindens, Tulip Trees, Cypress, Larch, Willows, Ash, Abele, Orientale Plane*, and all the best varieties of deciduous trees.
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 Contains a fine assortment of *Camelias*, grown as bushy, rather than tall, slender plants; and also contains all the well-known varieties of exotic plants, and many rare sorts introduced from Europe annually. These are all carefully grown for those who desire plants of symmetry and beauty.

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WHOLESALE AND RETAIL.—We offer a choice variety of Small Fruits, Strawberries, Raspberries, Blackberries, Currants, Rhubarb, &c., &c., including

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 which is considered the best of all Raspberries, unequalled in flavor and beauty, and very vigorous and exceedingly prolific. Also the Col. Wilder, Thunder and Cushing Raspberries. Also

MYATT'S LINNEUS RHUBARB,
 a new English variety, very superior, particularly tender, fine flavored and productive. Mr. Charles Downing states it to be the best either for market or garden culture. See his article in the *Horticulturist*, August, 1857.

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Freeman & Kendall,
 Ravenswood, L. I., near New-York.
 Please read the following references:
 We have visited Messrs. Freeman & Kendall's Fruit Gardens from which they are now offering to sell Plants, and we can say their Plants are well grown and very superior varieties. The Orange Raspberry and Linneus Rhubarb particularly. We take pleasure in recommending them to the public.
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OAKLAND NURSERY,
Throg's Neck,
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A general collection of Deciduous Trees from extra large to small size, among these are Norway, Silver and Sycamore Maples, Elms, Ash, Oaks, Beech, Purple and Weeping do, Larch, Laburnum, Paulownia, &c., &c.

A good collection of Shrubby Roses, Green-House Plants and Bedding Plants, Hollyhocks, Japan Lilies, &c., &c.
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Catalogues furnished on application.
 Packages of Trees delivered in New-York City without charge for freight, and thence shipped as directed.

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We are prepared to fill orders PROMPTLY for GENUINE PLANTS of this remarkable fruit, carefully packed for shipment to any part of the world, from Messrs. George Seymour & Co., the Messrs. Haddock and others of the largest and most reliable growers, at the following reduced prices, viz.:

\$125 per Thousand; \$15 per Hundred;
 \$8 per Fifty; \$4 50 per Two Dozen;
 \$2 50 per One Dozen; \$1 50 per Half Dozen.

Pamphlets treating of Origin, Characteristics and Culture of the Plant, forwarded on receipt of 6 cents.

DREW & FRENCH,
 Commission Dealers in Domestic Fruit and Produce,
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NEWMAN'S THORNLESS BLACKBERRY.—Strong and finely rooted Plants of this valuable new variety will be sent out this season at \$4 per doz., \$10 per fifty, \$18 per hundred, \$130 per thousand. Address **A. A. BENDEL, Milton, Ulster Co., N. Y.**
 Sole Agent for the sale of Plants.

The Allen Raspberry.

I again offer to the public this valuable, hardy, red **RASPBERRY**, of the Antwerp family, but not the TRUE Red Antwerp of the nurseries and market gardeners, as the Allen is perfectly hardy without winter protection in any climate where it has been tried, up to 45 deg. North. Mr. Allen has cultivated it in his farm gardens, of which I now have the charge, for ten years past, and it was only offered for sale last year, after fully testing its hardiness, prolific bearing, and large, high-flavored fruit. Its strong growth of cane requires no support, and it is every way a most valuable variety, not known elsewhere than in its present grounds, and places to which it has been transplanted.

Price 10 cents each, in quantities less than sixty. For five to eight dozen, \$1 per dozen. For one hundred or more, \$7 per hundred; payment remitted with the order.

The plants will be forwarded by express, railroad or steamboat, as soon after the October frosts as they can be taken up and packed.

A full description of the plant and fruit, and directions for cultivation, will be sent with each package.

Address care of **LEWIS F. ALLEN, Esq., Black Rock, N. Y.**
 August 13, 1857. **THOMAS DUFF.**

RASPBERRY PLANTS.—10,000 fine canes of the true Red Antwerp, also the same number of the new French double bearing variety, very prolific and hardy, and requiring no stakes for support, as they grow very stout and upright. These plants will be packed, delivered at the railroad at the low price of \$5 per hundred, or \$40 per thousand. Bedford, Westchester Co., N. Y. **F. D. TUCKER.**

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American Institute, at Crystal Palace	1855
do do do	1856
Maryland Institute, Baltimore	1855
do do do	1856
Philadelphia Agricultural Society	1855
New-Jersey State Fair, at Camden	1855
Summit Co. Fair, at Akron, Ohio	1855
do do do	1856
New-York State Fair, at Elmira	1855
do do do	1856
Connecticut State Fair, Hartford	1855
Mass. Mech. Charitable Association, at Boston	1856
Dutchess Co. Agricultural Fair	1856

Ten Diplomas, two Premiums, and one Medal, awarded in 1855-6.



This is a Canister, with a patent attachment, designed for preserving fruits and vegetables of all kinds in a perfectly fresh state, with their natural shape, color, and flavor. It is termed the "SELF-SEALING CAN," and so called because soldering is dispensed with in closing up the aperture of the can, and because, by the simple turning of a cap, the outward atmosphere is wholly excluded.

With these cans, and directions given with them, such fruits as Apples, Pears, Peaches, Strawberries, Raspberries, Blackberries, &c., and such vegetables as Tomatoes, Green Peas, Green Corn, Beans, and, indeed, every species of either, may be preserved for years in their fresh state, without the addition of salt, sugar, or acid, or any preservative property whatever. Many of these fruits decay and go to waste upon the trees, bushes, and market-places. Now they may be saved and used, out of their season, for table or pastry purposes.

With this Canister they can be preserved economically, as sugar and spirits may be dispensed with.
 Health is greatly promoted by the free use of fresh fruits and vegetables, while, on the contrary, digestion is greatly impeded, and the digestive organs impaired, by the use of preserved fruits so completely saturated with sugar as are the ordinary sweetmeats preserved by families.

These cans may be used year after year. Full directions for preserving fruit and vegetables accompany the cans.

N. B.—The "Genuine Self-Sealing Can" have cast in letters, upon the top of the cap, "Spratt's Patent." Wells and Provost, Proprietors, New-York. This much is mentioned to prevent imposition upon the public by any spurious or worthless article in imitation. All the cans are guaranteed to answer fully and perfectly the purpose for which they are recommended.

PRICES.

Quart Cans, per dozen.....\$2 50
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 Gallon Cans, do.....\$ 50
 Wrenches, each.....\$ 06

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 No. 215 Front-st., near Beekman, New-York.

LAWTON (OR NEW-ROCHELLE) BLACKBERRY PLANTS.

PRICES REDUCED!
The Subscribers announce to their friends and customers that they have now

OVER SIX ACRES
of the
GENUINE LAWTON (OR NEW-ROCHELLE)
BLACKBERRY PLANTS

under cultivation, and in good condition.
They are therefore prepared to fill large orders the coming

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One Thousand Plants.....	\$125
One Hundred Plants.....	15
Fifty Plants.....	8
Two Dozen Plants.....	4 50
One Dozen Plants.....	2 50
One Half Dozen Plants.....	1 50

Good Plants for setting, of a second size, will be sold for \$100 per 1,000 Plants, or \$12 per 100 Plants.

N. B.—All Plants ordered of us will be TAKEN UP AND PACKED WITH THE GREATEST CARE, AND UNDER OUR OWN PERSONAL SUPERVISION.

OF THE MANY THOUSANDS sent out by us last year, we have heard very few instances of failure, notwithstanding that they have been forwarded to

EVERY PART OF THE COUNTRY.

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GEORGE SEYMOUR & CO.,
South Norwalk, Conn.

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GEO. SEYMOUR & CO.

Lawton Blackberry Plants.

In all cases warranted of the original stock, and raised under the supervision of the Subscriber upon his own grounds in New Rochelle.

SCALE OF PRICES BY THE DOZEN.

A package of one dozen.....	\$3
Do. two dozen.....	5
Do. five dozen.....	10
Do. eight dozen.....	15
Do. twelve dozen.....	20

The name and direction of purchasers should be distinctly written, and the money accompany the order.

Address WILLIAM LAWTON,
51 Wall street, New-York, or New Rochelle, N. Y.
OCTOBER, 1857.

The New Rochelle Blackberry.

THE SUBSCRIBER offers for sale genuine Plants at the following prices, viz.:

\$125 per thousand.	\$15 per one hundred.
\$8 for fifty.	\$3 for twenty-five.
	\$3 per dozen.

This is the same variety that is by some erroneously called the Lawton Blackberry.

Also, KOP TREES.—A rare and valuable Tree, whose fruit possesses all the properties of the ordinary hop.
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It is the only machine ever invented which rubs the clothes (getting them clean), without tearing them or breaking the buttons.

IT SAVES THREE-FOURTHS OF THE TIME AND LABOR.
And washes all fabrics from the finest to the coarsest without injuring them.

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And public and private houses in city and country too numerous to mention.

Price of Single Tub, \$5 50.

Sold wholesale and retail by R. L. ALLEN,
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On the Western Plank Road, near the Orphan Asylum, Albany, N. Y.

The subscriber having purchased the Drain Tile Works of Archer & Co., offers for sale the following-sized Tile:

Horse Shoe Tile cut 14 inches long—	2 in. calibre.....	3 in. calibre.....	4 in. calibre.....	5 in. calibre.....	6 in. calibre.....	7 in. calibre.....	8 in. calibre.....
12 per 1,000	15	18	20	22	24	26	28
12 per 1,000	15	18	20	22	24	26	28
12 per 1,000	15	18	20	22	24	26	28
12 per 1,000	15	18	20	22	24	26	28
12 per 1,000	15	18	20	22	24	26	28
12 per 1,000	15	18	20	22	24	26	28
12 per 1,000	15	18	20	22	24	26	28

I warrant every Tile perfectly sound, and harder and better than any before made in Albany. If not, the purchaser need not pay for them. I will also undertake Draining to any amount, and at any place, and furnish Tile for the same, and ask no pay until the employer is perfectly satisfied with the result. I am also willing to render my services in laying out Drains free of charge, to any one who purchases Tile of me.

A liberal per centage will be allowed on orders for 10,000 or more. Carriage free. Gentlemen, your patronage is respectfully solicited. Orders from all parts thankfully received, and promptly attended to.

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Office, 63 Quay-street.
(Late ARCHER & CO.)

Hildreth's Celebrated IRON GANG PLOW

has invariably taken the

FIRST PREMIUM

at every Fair wherever exhibited in several States and Counties. It is fast superseding all other implements for cross-plowing and surface cultivation.

One of these Gangs is now on exhibition at the Crystal Palace. Please see cut and editorial remarks in August number of this paper.

Circulars with full description, testimonials, &c., furnished on application to
HILDRETH & CHARLES,
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Lindsey's Rotary Force and Lift Pump. BEST PUMP FOR RAILROADS.



THIS Pump, patented in England and America, is now greatly improved, and in successful operation in various parts of the world. It is warranted to work by hand all depths under 100 feet, and is made, pipe and all, of wrought and THE cast iron will not get out of order, will not rust, will not freeze, will last an age, anybody can put it up, works by hand, water, wind or steam—throws and raises water, from 16 to 30 gallons per minute, has side-gearing and balance wheels, and costs, complete, for all depths under 100 feet, from \$20 to \$60. Drawings, with full particulars and prices, sent free of postage to all parts of the world, on application to

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IS NOW PREPARED TO SELL ABOUT

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FARMING LANDS,

IN TRACTS OF FORTY ACRES AND UPWARDS

ON LONG CREDITS, AND AT LOW RATES OF INTEREST.

THESE LANDS WERE GRANTED BY

the Government to aid the construction of this Road, and are among the richest and most fertile in the world. They extend from Northeast and Northwest, through the middle of the State, to the extreme South, and include every variety of climate and productions found between those parallels of latitude. The Northern portion is chiefly prairie, interspersed with fine groves, and in the Middle and Southern sections timber predominates, alternating with beautiful prairies and openings.

The climate is more healthy, mild and equable, than any other part of the country; the air is pure and bracing, while living streams and springs of excellent water abound.

Bituminous Coal is extensively mined, and supplies a cheap and desirable fuel, being furnished at many points at \$2 to \$4 per ton, and wood can be had at the same rate per cord.

Building Stone of excellent quality also abounds, which can be procured for little more than the expense of transportation.

The great fertility of these lands, which are a black rich mold from two to five feet deep, and gently rolling—their contiguity to this road, by which every facility is furnished for travel and transportation to the principal markets North, South, East, West, and the economy with which they can be cultivated, render them the most valuable investment that can be found, and present the most favorable opportunity for persons of industrious habits and small means to acquire a comfortable independence in a few years.

Chicago is now the greatest grain market in the world, and the facility and economy with which the products of these lands can be transported to that market, make them much more profitable at the prices asked than those more remote at Government rates, as the additional cost of transportation is a perpetual tax on the latter, which must be borne by the producer in the reduced price he receives for his grain, &c.

The Title is Perfect, and when the final payments are made, Deeds are executed by the Trustees appointed by the State, and in whom the title is vested to the purchasers, which convey to them absolute titles in Fee Simple, free and clear of every incumbrance, lien or mortgage.

The prices are from \$6 to \$30.

INTEREST ONLY 3 PER CENT.

20 per cent. deducted from the Credit price for Cash.

Those who purchase on long credit give notes payable in 2, 3, 4, 5 and 6 years after date, and are required to improve one-tenth annually for five years, so as to have one-half the land under cultivation at the end of that time.

Competent Surveyors will accompany those who wish to examine these lands, free of charge, and aid them in making selections.

The lands remaining unsold are as rich and valuable as those which have been disposed of.

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JOHN WILSON,

Land Commissioner of the Illinois Central Railroad Co.
Office in Illinois Central Railroad Depot, Chicago, Illinois.

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CIDER MILLS—Hickok's new and improved kind, the best in the United States.

HORSE POWERS of all kinds—Allen's Railroad, Emery's do., Taplin's rim or circular, Bogardus' iron, &c. &c.

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VEGETABLE CUTTERS.

SAUSAGE CUTTERS AND STUFFERS.

CARTS and WAGONS made to order.

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Plows of every description for Northern and Southern use, and for every kind of soil and crop.

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POTATO DIGGERS—The Langdon Plow, with its attachments, is admirably adapted to this purpose.

PILKINGTON SMUT MACHINE—The best and cheapest in use.

MOTT'S VEGETABLE BOILERS.

LITTLE GIANT CORN and COB CRUSHERS.

ROAD SCRAPERS.

SUGAR MILLS for crushing the Chinese and other Sugar Cane, of various sizes and patterns.

All the foregoing, of the best kinds and most reliable materials, Wholesale and Retail, by

R. L. ALLEN,

189 Water-street, New-York.

HICKOK'S KEYSTONE CIDER MILL,

MANUFACTURED BY THE

EAGLE WORKS, HARRISBURG, Pa.

This sterling Machine has within the past year been put to severe actual tests, and been very much improved by the addition of a 22-inch fly-wheel, new gearing, joint bolts, and other minor improvements, and is now offered to the public with the certainty that it is made in the very best manner, and that it will grind and press easier and faster than any other Mill in the market. Dealers and others supplied on liberal terms.

Address W. O. HICKOK,

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HAND-POWER HAY PRESS.—W. W.

DINGEE & CO., York, Pa., make a cheap portable Hay Press, combining every improvement suggested by 12 years' use. Write for Circular, giving dimensions, prices, &c.

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Bars, Hooks, &c., for sale by R. L. ALLEN,
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Agricultural Exhibitions for 1857.

The Agricultural Exhibitions, Shows and Fairs, together with the Agricultural Horse-Races, are in active operation. Most of the legitimate Exhibitions are quite successful; we should be sorry to say as much of the horse-races, falsely called Agricultural Fairs. In addition to full lists of the time and place of several hundred Exhibitions, given on pages 188 and 216, (August and September numbers,) we append the following list of County Exhibitions not previously published:

CONNECTICUT.—Hartford County, at Hartford, Oct. 6 to 9, inclusive.

PENNSYLVANIA.—Montgomery, at Springtown, Oct. 7 to 8; Berks, at Reading, Oct. 7 to 10; McKean, at Smithport, Oct. 14 to 16; Huntingdon, at Huntingdon, Oct. 15 to 16; Northumberland, at Milton, Oct. 15 to 16.

DELAWARE.—New Castle, at Wilmington, Oct. 7 and 8.

OHIO.—Highland, at Hillsboro, Oct. 6 to 8; Henry, at Napoleon, Oct. 7 and 8; Stark, at Canton, Oct. 7 to 9; Sandusky, at Fremont, Oct. 15 and 16, Crawford, at Bucyrus, Oct. 15 and 16.

INDIANA.—Washtenaw, at Ann Arbor, Oct. 7 to 9.

Washtenaw and Wayne Union, at Ypsilanti, Oct. 7 to 9.

ILLINOIS.—Beureau, at Princeton, Oct. 2 and 3; Christian, at Taylorsville, Oct. 21 to 23.

IOWA.—Hardin, at Eldora, Oct. 23.

MARKET REVIEW, WEATHER NOTES, &c.

AMERICAN AGRICULTURIST OFFICE,
New-York, Sept. 25, 1857.

The Money Market troubles, the numerous failures reported, the free receipts of produce, and the manifest eagerness of most dealers to realize, have seriously injured the Produce Markets during the month, having induced much caution in purchasing, with great depression and irregularity in prices. Breadstuffs were freely offered at decidedly lower rates, which had the effect of eliciting a better inquiring both for home use and exports; and but for the stringency in financial affairs, a very vigorous business would have been the result. Recently the pressure for ready means among our produce dealers is not quite so urgent, and as the demand is generally good, the market is, perhaps only temporarily regaining much of its lost firmness and buoyancy. Cotton has been very dull at uniform prices, purchasers buying only such lots as they immediately required. It appears that the crop of the year ending the 1st inst., was 2,939,519 bales, against 3,227,845 last year, and 2,847,339 the year before. The total foreign export is 4,252,657 bales, against 2,954,006 last year—a decrease of 701,949 bales. Of the crop 45,314 bales were Sea Islands, against 44,512 last year, and 40,841 the year before. The consumption of the country North of Virginia is shown to be 702,138 bales, in that state 18,341, and in the other Southern and Western states 119,246—making the entire consumption of the country to Sept. 1, 1857, say 840,000 bales, against 768,000 last year. The first bale of the new crop marketed, this year, reached Charleston, on August 20th, and the subsequent week, several early specimens were received in other Southern ports. The anticipation is that the crop will be a very good one. Provisions have been in moderate request, closing heavily and languidly at our revised quotations below. Groceries were rather lightly dealt in at drooping prices. Some new crops Louisiana Sugar reached New Orleans on the 1st inst.; and on the same day, 65 barrels new Molasses, from Chinese Sugar Cane, were received in the same markets. Hay was in fair demand, but at reduced rates, closing with considerable steadiness and uniformity in prices. The supply is ample of new, but is very limited of old. The last sale of salt hay (which is out of market) was effected at 62c. per 100 lbs. Hops are plentiful and cheaper. On the 31st ult. the first cut this season, of the new crop arrived here, from Vermont. It was offered at 25 cents per lb., but subsequently contracts were reported, for new hops, for delivery, to brewers during October, February and March, at 14c. per 100 lbs. At present new hops are obtainable here at 10c. per 100 lbs., but are inactive. Hemp, Rice, Tobacco and Wool appeared very quiet at prices, generally more in favor of buyers, than of sellers. These have suffered much from the stringency in the Money Market.

The subjoined tabular statement presents summaries of the total receipts of the leading kinds of Breadstuffs, by railroad, river and coastwise, and of the total sales, here, for twenty-five business days, ending to-day.

	Nominal	87c	93c
Wheat, dressed, per lb.	15	16	16
BUTTER—Western, per lb.	15	20	14
State, per lb.	17	25	17
CHEESE, per lb.	6	10	7
Eggs, fresh, per dozen	15	15 1/2	15
FEATHERS, Live Geese per lb.	18	22	16
SEED—Clover, per lb.	11 1/2	11 1/2	12
Timothy, mowed, per bushel	3 50	3 87	Nominal
Timothy, reaped, per bushel	4 00	4 25	3 25
SUGAR, Brown, per lb.	7 1/2	11 1/2	6 1/2
MOLASSES, New-Orleans, per gal	Nominal	45	50
COFFEE, Rio, per lb.	10 1/2	12 1/2	10 1/2
Hyon Tens, per lb.	32	75	37
Congou Tens, per lb.	33	47	38
TOBACCO—Kentucky, &c. pr lb	9 1/2	20	11
Seed Lent, per lb.	13	35	12
Wool—Domestic fleece, per lb.	36	55	35
Domestic, pulled, per lb.	33	47	38
HEMP—Under Amer'n pr ton	160	170	160
Dressed American, per ton	210	225	210
TALLOW, per lb.	12 1/2	12 1/2	11 1/2
OIL CAKE, per ton	39	42	31
POTATOES—June, per bbl.	1 87	2 00	2 00
Dykeman, per bbl.	2 25	2 50	2 50
Mercers, per bbl.	3 50	3 00	2 50
Sweet, per bbl.	5 00	4 50	2 50
ONIONS—Red, per bushel	1 35	1 35	1 50
White and yellow, per bushel	1 75	1 75	2 00
BEETS—Per 100 bunches	2 00	3 50	1 00
CRANBERRIES—Per bbl.	37	50	80
TOMATOES—Per bushel	3 50	6 00	3 00
APPLES—Common, per bbl.	2 00	2 50	1 50
Table, per bbl.	5 50	6 00	3 00
Fall Pippins, per bbl.	3 00	3 00	5 00
PEARS—Common, per bbl.	2 50	3 00	1 50
Barlett, per bbl.	12 00	15 00	12 00
PEACHES—Per bushel	1 50	2 50	2 50
PLUMS—Per bushel	3 00	4 50	5 00
TURNIPS—Ruta bagas, per bbl	75	1 00	1 25
PUMPKINS—Per 100	1 50	1 75	1 50
SQUASHES—Marrow, per bbl.	75	1 00	1 50
BEANS—Lima, per bushel	75	1 00	1 00
CABBAGES—Per 100	2 00	6 00	1 00
CARLIFLOWER—Per dozen	1 00	1 25	87
EGG PLANTS—Per dozen	75	87	50
CELERY—Per dozen	87	1 00	75
POULTRY—Fowls, per pair	87	1 00	88
Chickens, per pair	56	1 12	50
Ducks, per pair	1 00	1 25	75
Turkeys, per lb.	16	18	20
Geese, each	1 00	1 50	1 00
Pigs—Roasters	1 00	1 75	2 25

The subjoined tabular statement presents summaries of the total receipts of the leading kinds of Breadstuffs, by railroad, river and coastwise, and of the total sales, here, for twenty-five business days, ending to-day.

	Receipts	Sales
Wheat Flour, bbls.	242,500	198,085
Wheat, bushels	722,000	1,048,300
Corn, bushels	1,204,000	981,500
Rye, bushels	31,000	25,000
Barley, bushels	31,000	25,000
Oats, bushels	38,400	25,000

The following is a comparative statement of the annual exports of Breadstuffs, from our Atlantic ports, each year ending Sept. 1:

	Flour, bbls.	C. Meal, bbls.	Wheat, bushels.	Corn, bbls.
1856 to Sept. 1, '57	849,000	6,817	7,479,461	4,746,278
1855 to Sept. 1, '56	1,641,295	6,817	7,936,400	6,781,161
1854 to Sept. 1, '55	1,752,209	4,768	324,427	6,579,138
1853 to Sept. 1, '54	1,846,920	41,726	6,038,003	6,049,371
1852 to Sept. 1, '53	1,600,449	100	4,233,519	1,425,278
1851 to Sept. 1, '52	1,427,442	1,680	2,728,442	1,467,398
1850 to Sept. 1, '51	1,339,594	5,620	1,496,555	2,260,691
1849 to Sept. 1, '50	474,757	6,414	461,276	4,733,338
1848 to Sept. 1, '49	1,137,556	82,900	1,140,194	12,685,269
1847 to Sept. 1, '48	182,585	168,534	241,369	4,390,226
1846 to Sept. 1, '47	3,155,844	84,187	4,000,359	16,137,650
Total, 11 years	14,651,209	1,103,427	36,069,691	68,310,728

LIVE STOCK MARKETS.—The receipts of Beef Cattle for four weeks, ending Sept. 16, were 14,404, against 13,000 for four weeks preceding it. Receipts for the week ending August 26, 2,703; Sept. 2, 4,040; Sept. 9, 3,334; Sept. 16, 4,327. Prices varied as follows: Aug. 26, 1c. higher; Sept. 2, 1c. lower; Sept. 9, 1c. higher; Sept. 16, 1c. lower; making a decline of 1c. for the month. Wednesday, Sept. 16, prices ranged: Premium Cattle, 11c. @ 12c.; First quality, 11c. @ 11 1/2c.; Medium quality, 9c. @ 10c.; Poor quality, 8c. @ 9c. Poorest quality, 7c. @ 8c.; General selling prices, 9c. @ 11c.; Average of all sales, 9c. @ 9 1/2c.

Receipts of Sheep and Lambs for the same period have been 53,815, or about 7,000 more than last month. Prices have declined a little during the month, ranging now at 4c. @ 5c. live weight for good sheep and 4c. @ 6c. for lambs.

Hogs are now arriving pretty freely. The receipts at the principal yards of this city have been 7,800 during the past four weeks. Prices now range 7c. @ 7 1/2c. live weight for fat corn fed hogs, and 6c. @ 7c. for distillery hogs.

THE WEATHER during the present month, or since our last notes closed, has been variable, commencing with heavy rains, succeeded by warm weather with no rain for a fortnight, during the latter part of which time there were frosts on low grounds. Next we have a succession of rains and heavy blows doing extensive damage to the shipping upon the Southern coast, and for a few days past it has been cool enough for fires in doors. The Equinoctial storm apparently commenced with us on the 19th inst.

Our condensed Weather Notes read: August 26, and 27, clear and warm with heavy rain on the night of the 27th; 28, hard rain A. M., clear and warm P. M., warm weather continued until Sept. 7, at which time the ground was dry and roads quite dusty; Sept. 8 and 9, fine days with light frosts at night on low grounds; at the North, some corn fields in a green state, were injured, 10th clear and warm; 11 clear at this place but the beginning of a heavy gale on the Southern coast in which the Central America foundered on the following day; 12 cloudy with light rain at night; 13 slight rain, cloudy A. M., rain P. M.; 15 and 16 clear, fine and warm; 17 warm rain, 18 clear and warm; 19 cold rain storm; 20 cloudy A. M. clear P. M., cold continues; 21 and 22 cool but pleasant; heavy cold rain on night of 22; 23 clear & warm.

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